



SEQUENCE LISTING

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<120> PRODUCTS AND PROCESSES FOR MODULATING
PEPTIDE-PEPTIDE BINDING DOMAIN INTERACTIONS

<130> 01997/545003

<140> 10/713,978

<141> 2003-11-14

<150> US 60/487,899

<151> 2003-07-17

<150> US 60/485,641

<151> 2003-07-08

<150> US 60/426,132

<151> 2002-11-14

<160> 95

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 603

<212> PRT

<213> Homo sapiens

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Ala	Ala	Pro	Pro	Ala	Lys	Glu	Ile	Pro	Glu	Val	Leu	Val	Asp	Pro	Arg
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Ser	Arg	Arg	Arg	Tyr	Val	Arg	Gly	Arg	Phe	Leu	Gly	Lys	Gly	Gly	Phe
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Ala	Lys	Cys	Phe	Glu	Ile	Ser	Asp	Ala	Asp	Thr	Lys	Glu	Val	Phe	Ala
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Gly	Lys	Ile	Val	Pro	Lys	Ser	Leu	Leu	Leu	Lys	Pro	His	Gln	Arg	Glu
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Lys	Met	Ser	Met	Glu	Ile	Ser	Ile	His	Arg	Ser	Leu	Ala	His	Gln	His
			100					105					110		
Val	Val	Gly	Phe	His	Gly	Phe	Phe	Glu	Asp	Asn	Asp	Phe	Val	Phe	Val
		115					120					125			
Val	Leu	Glu	Leu	Cys	Arg	Arg	Arg	Ser	Leu	Leu	Glu	Leu	His	Lys	Arg
	130					135					140				
Arg	Lys	Ala	Leu	Thr	Glu	Pro	Glu	Ala	Arg	Tyr	Tyr	Leu	Arg	Gln	Ile
145					150					155				160	
Val	Leu	Gly	Cys	Gln	Tyr	Leu	His	Arg	Asn	Arg	Val	Ile	His	Arg	Asp

Leu	Lys	Leu	Gly	Asn	Leu	Phe	Leu	Asn	Glu	Asp	Leu	Glu	Val	Lys	Ile
			180					185					190		
Gly	Asp	Phe	Gly	Leu	Ala	Thr	Lys	Val	Glu	Tyr	Asp	Gly	Glu	Arg	Lys
		195					200					205			
Lys	Thr	Leu	Cys	Gly	Thr	Pro	Asn	Tyr	Ile	Ala	Pro	Glu	Val	Leu	Ser
	210						215				220				
Lys	Lys	Gly	His	Ser	Phe	Glu	Val	Asp	Val	Trp	Ser	Ile	Gly	Cys	Ile
225					230					235					240
Met	Tyr	Thr	Leu	Leu	Val	Gly	Lys	Pro	Pro	Phe	Glu	Thr	Ser	Cys	Leu
			245						250					255	
Lys	Glu	Thr	Tyr	Leu	Arg	Ile	Lys	Lys	Asn	Glu	Tyr	Ser	Ile	Pro	Lys
		260						265					270		
His	Ile	Asn	Pro	Val	Ala	Ala	Ser	Leu	Ile	Gln	Lys	Met	Leu	Gln	Thr
	275						280					285			
Asp	Pro	Thr	Ala	Arg	Pro	Thr	Ile	Asn	Glu	Leu	Leu	Asn	Asp	Glu	Phe
	290					295					300				
Phe	Thr	Ser	Gly	Tyr	Ile	Pro	Ala	Arg	Leu	Pro	Ile	Thr	Cys	Leu	Thr
305					310				315						320
Ile	Pro	Pro	Arg	Phe	Ser	Ile	Ala	Pro	Ser	Ser	Leu	Asp	Pro	Ser	Asn
			325					330					335		
Arg	Lys	Pro	Leu	Thr	Val	Leu	Asn	Lys	Gly	Leu	Glu	Asn	Pro	Leu	Pro
		340						345					350		
Glu	Arg	Pro	Arg	Glu	Lys	Glu	Glu	Pro	Val	Val	Arg	Glu	Thr	Gly	Glu
		355				360						365			
Val	Val	Asp	Cys	His	Leu	Ser	Asp	Met	Leu	Gln	Gln	Leu	His	Ser	Val
	370					375					380				
Asn	Ala	Ser	Lys	Pro	Ser	Glu	Arg	Gly	Leu	Val	Arg	Gln	Glu	Glu	Ala
385					390					395					400
Glu	Asp	Pro	Ala	Cys	Ile	Pro	Ile	Phe	Trp	Val	Ser	Lys	Trp	Val	Asp
			405					410					415		
Tyr	Ser	Asp	Lys	Tyr	Gly	Leu	Gly	Tyr	Gln	Leu	Cys	Asp	Asn	Ser	Val
		420						425					430		
Gly	Val	Leu	Phe	Asn	Asp	Ser	Thr	Arg	Leu	Ile	Leu	Tyr	Asn	Asp	Gly
	435					440						445			
Asp	Ser	Leu	Gln	Tyr	Ile	Glu	Arg	Asp	Gly	Thr	Glu	Ser	Tyr	Leu	Thr
	450					455					460				
Val	Ser	Ser	His	Pro	Asn	Ser	Leu	Met	Lys	Lys	Ile	Thr	Leu	Leu	Lys
465					470					475					480
Tyr	Phe	Arg	Asn	Tyr	Met	Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn
			485					490						495	
Ile	Thr	Pro	Arg	Glu	Gly	Asp	Glu	Leu	Ala	Arg	Leu	Pro	Tyr	Leu	Arg
		500						505					510		
Thr	Trp	Phe	Arg	Thr	Arg	Ser	Ala	Ile	Ile	Leu	His	Leu	Ser	Asn	Gly
	515						520					525			
Ser	Val	Gln	Ile	Asn	Phe	Phe	Gln	Asp	His	Thr	Lys	Leu	Ile	Leu	Cys
	530					535					540				
Pro	Leu	Met	Ala	Ala	Val	Thr	Tyr	Ile	Asp	Glu	Lys	Arg	Asp	Phe	Arg
545					550					555					560
Thr	Tyr	Arg	Leu	Ser	Leu	Leu	Glu	Glu	Tyr	Gly	Cys	Cys	Lys	Glu	Leu
			565					570						575	
Ala	Ser	Arg	Leu	Arg	Tyr	Ala	Arg	Thr	Met	Val	Asp	Lys	Leu	Leu	Ser
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<210> 2

<211> 7

<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 1
<223> Xaa = Pro or Phe

<221> VARIANT
<222> 2
<223> Xaa = Pro or any Hydrophobic acid

<221> VARIANT
<222> 3
<223> Xaa = Ala, Gln or any hydrophobic amino acid

<221> VARIANT
<222> 4
<223> Xaa = Thr, Gln, His or Met

<221> VARIANT
<222> 6
<223> Xaa = phosphorylated Thr or phosphorylated Ser

<221> VARIANT
<222> 7
<223> Xaa = Pro or any amino acid

<400> 2
Xaa Xaa Xaa Xaa Ser Xaa Xaa
1 5

<210> 3
<211> 15
<212> PRT
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<220>
<221> MOD_RES
<222> 8
<223> Threonine at position 8 is phosphorylated
Threonine

<400> 3
Met Ala Gly Pro Met Gln Ser Thr Pro Leu Asn Gly Ala Lys Lys
1 5 10 15

<210> 4
<211> 685
<212> PRT
<213> Homo sapiens

<400> 4
Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys
1 5 10 15
Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asp Ser Lys Lys
20 25 30

Lys	Arg	Pro	Pro	Gln	Pro	Pro	Glu	Glu	Ser	Gln	Pro	Pro	Gln	Ser	Gln
		35					40					45			
Ala	Gln	Val	Pro	Pro	Ala	Ala	Pro	His	His	His	His	His	His	Ser	His
	50					55					60				
Ser	Gly	Pro	Glu	Ile	Ser	Arg	Ile	Ile	Val	Asp	Pro	Thr	Thr	Gly	Lys
65					70					75					80
Arg	Tyr	Cys	Arg	Gly	Lys	Val	Leu	Gly	Lys	Gly	Gly	Phe	Ala	Lys	Cys
				85					90					95	
Tyr	Glu	Met	Thr	Asp	Leu	Thr	Asn	Asn	Lys	Val	Tyr	Ala	Ala	Lys	Ile
			100					105					110		
Ile	Pro	His	Ser	Arg	Val	Ala	Lys	Pro	His	Gln	Arg	Glu	Lys	Ile	Asp
		115					120					125			
Lys	Glu	Ile	Glu	Leu	His	Arg	Ile	Leu	His	His	Lys	His	Val	Val	Gln
	130					135					140				
Phe	Tyr	His	Tyr	Phe	Glu	Asp	Lys	Glu	Asn	Ile	Tyr	Ile	Leu	Leu	Glu
145					150					155					160
Tyr	Cys	Ser	Arg	Arg	Ser	Met	Ala	His	Ile	Leu	Lys	Ala	Arg	Lys	Val
				165					170					175	
Leu	Thr	Glu	Pro	Glu	Val	Arg	Tyr	Tyr	Leu	Arg	Gln	Ile	Val	Ser	Gly
			180					185					190		
Leu	Lys	Tyr	Leu	His	Glu	Gln	Glu	Ile	Leu	His	Arg	Asp	Leu	Lys	Leu
		195					200					205			
Gly	Asn	Phe	Phe	Ile	Asn	Glu	Ala	Met	Glu	Leu	Lys	Val	Gly	Asp	Phe
	210					215					220				
Gly	Leu	Ala	Ala	Arg	Leu	Glu	Pro	Leu	Glu	His	Arg	Arg	Arg	Thr	Ile
225					230					235					240
Cys	Gly	Thr	Pro	Asn	Tyr	Leu	Ser	Pro	Glu	Val	Leu	Asn	Lys	Gln	Gly
				245					250					255	
His	Gly	Cys	Glu	Ser	Asp	Ile	Trp	Ala	Leu	Gly	Cys	Val	Met	Tyr	Thr
			260					265					270		
Met	Leu	Leu	Gly	Arg	Pro	Pro	Phe	Glu	Thr	Thr	Asn	Leu	Lys	Glu	Thr
		275					280					285			
Tyr	Arg	Cys	Ile	Arg	Glu	Ala	Arg	Tyr	Thr	Met	Pro	Ser	Ser	Leu	Leu
	290					295					300				
Ala	Pro	Ala	Lys	His	Leu	Ile	Ala	Ser	Met	Leu	Ser	Lys	Asn	Pro	Glu
305					310					315					320
Asp	Arg	Pro	Ser	Leu	Asp	Asp	Ile	Ile	Arg	His	Asp	Phe	Phe	Leu	Gln
				325					330					335	
Gly	Phe	Thr	Pro	Asp	Arg	Leu	Ser	Ser	Ser	Cys	Cys	His	Thr	Val	Pro
			340					345					350		
Asp	Phe	His	Leu	Ser	Ser	Pro	Ala	Lys	Asn	Phe	Phe	Lys	Lys	Ala	Ala
		355					360					365			
Ala	Ala	Leu	Phe	Gly	Gly	Lys	Lys	Asp	Lys	Ala	Arg	Tyr	Ile	Asp	Thr
	370					375					380				
His	Asn	Arg	Val	Ser	Lys	Glu	Asp	Glu	Asp	Ile	Tyr	Lys	Leu	Arg	His
385					390					395					400
Asp	Leu	Lys	Lys	Thr	Ser	Ile	Thr	Gln	Gln	Pro	Ser	Lys	His	Arg	Thr
			405						410					415	
Asp	Glu	Glu	Leu	Gln	Pro	Pro	Thr	Thr	Thr	Val	Ala	Arg	Ser	Gly	Thr
			420					425					430		
Pro	Ala	Val	Glu	Asn	Lys	Gln	Gln	Ile	Gly	Asp	Ala	Ile	Arg	Met	Ile
		435					440					445			
Val	Arg	Gly	Thr	Leu	Gly	Ser	Cys	Ser	Ser	Ser	Ser	Glu	Cys	Leu	Glu
	450					455					460				
Asp	Ser	Thr	Met	Gly	Ser	Val	Ala	Asp	Thr	Val	Ala	Arg	Val	Leu	Arg
465					470					475					480
Gly	Cys	Leu	Glu	Asn	Met	Pro	Glu	Ala	Asp	Cys	Ile	Pro	Lys	Glu	Gln
				485					490					495	
Leu	Ser	Thr	Ser	Phe	Gln	Trp	Val	Thr	Lys	Trp	Val	Asp	Tyr	Ser	Asn

			500					505					510				
Lys	Tyr	Gly	Phe	Gly	Tyr	Gln	Leu	Ser	Asp	His	Thr	Val	Gly	Val	Leu		
		515					520					525					
Phe	Asn	Asn	Gly	Ala	His	Met	Ser	Leu	Leu	Pro	Asp	Lys	Lys	Thr	Val		
	530					535					540						
His	Tyr	Tyr	Ala	Glu	Leu	Gly	Gln	Cys	Ser	Val	Phe	Pro	Ala	Thr	Asp		
545					550					555					560		
Ala	Pro	Glu	Gln	Phe	Ile	Ser	Gln	Val	Thr	Val	Leu	Lys	Tyr	Phe	Ser		
			565						570					575			
His	Tyr	Met	Glu	Glu	Asn	Leu	Met	Asp	Gly	Gly	Asp	Leu	Pro	Ser	Val		
		580					585						590				
Thr	Asp	Ile	Arg	Arg	Pro	Arg	Leu	Tyr	Leu	Leu	Gln	Trp	Leu	Lys	Ser		
	595					600					605						
Asp	Lys	Ala	Leu	Met	Met	Leu	Phe	Asn	Asp	Gly	Thr	Phe	Gln	Val	Asn		
610					615					620							
Phe	Tyr	His	Asp	His	Thr	Lys	Ile	Ile	Ile	Cys	Ser	Gln	Asn	Glu	Glu		
625					630					635					640		
Tyr	Leu	Leu	Thr	Tyr	Ile	Asn	Glu	Asp	Arg	Ile	Ser	Thr	Thr	Phe	Arg		
			645					650						655			
Leu	Thr	Thr	Leu	Leu	Met	Ser	Gly	Cys	Ser	Ser	Glu	Leu	Lys	Asn	Arg		
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<210> 5
 <211> 607
 <212> PRT
 <213> Homo sapiens

<400> 5

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Pro	Arg	Ser	Gly	Arg	Thr	Tyr	Leu	Lys	Gly	Arg	Leu	Leu	Gly	Lys	Gly		
		20					25					30					
Gly	Phe	Ala	Arg	Cys	Tyr	Glu	Ala	Thr	Asp	Thr	Glu	Thr	Gly	Ser	Ala		
	35				40						45						
Tyr	Ala	Val	Lys	Val	Ile	Pro	Gln	Ser	Arg	Val	Ala	Lys	Pro	His	Gln		
	50				55					60							
Arg	Glu	Lys	Ile	Leu	Asn	Glu	Ile	Glu	Leu	His	Arg	Asp	Leu	Gln	His		
65				70				75						80			
Arg	His	Ile	Val	Arg	Phe	Ser	His	His	Phe	Glu	Asp	Ala	Asp	Asn	Ile		
		85						90					95				
Tyr	Ile	Phe	Leu	Glu	Leu	Cys	Ser	Arg	Lys	Ser	Leu	Ala	His	Ile	Trp		
	100						105					110					
Lys	Ala	Arg	His	Thr	Leu	Leu	Glu	Pro	Glu	Val	Arg	Tyr	Tyr	Leu	Arg		
	115					120					125						
Gln	Ile	Leu	Ser	Gly	Leu	Lys	Tyr	Leu	His	Gln	Arg	Gly	Ile	Leu	His		
	130				135					140							
Arg	Asp	Leu	Lys	Leu	Gly	Asn	Phe	Phe	Ile	Thr	Glu	Asn	Met	Glu	Leu		
145				150					155					160			
Lys	Val	Gly	Asp	Phe	Gly	Leu	Ala	Ala	Arg	Leu	Glu	Pro	Pro	Glu	Gln		
		165					170							175			
Arg	Lys	Lys	Thr	Ile	Cys	Gly	Thr	Pro	Asn	Tyr	Val	Ala	Pro	Glu	Val		
	180						185					190					
Leu	Leu	Arg	Gln	Gly	His	Gly	Pro	Glu	Ala	Asp	Val	Trp	Ser	Leu	Gly		
	195					200					205						
Cys	Val	Met	Tyr	Thr	Leu	Leu	Cys	Gly	Ser	Pro	Pro	Phe	Glu	Thr	Ala		
	210					215					220						

Asp	Leu	Lys	Glu	Thr	Tyr	Arg	Cys	Ile	Lys	Gln	Val	His	Tyr	Thr	Leu
225					230					235					240
Pro	Ala	Ser	Leu	Ser	Leu	Pro	Ala	Arg	Gln	Leu	Leu	Ala	Ala	Ile	Leu
				245					250						255
Arg	Ala	Ser	Pro	Arg	Asp	Arg	Pro	Ser	Ile	Asp	Gln	Ile	Leu	Arg	His
			260					265					270		
Asp	Phe	Phe	Thr	Lys	Gly	Tyr	Thr	Pro	Asp	Arg	Leu	Pro	Ile	Ser	Ser
	275						280					285			
Cys	Val	Thr	Val	Pro	Asp	Leu	Thr	Pro	Pro	Asn	Pro	Ala	Arg	Ser	Leu
	290					295					300				
Phe	Ala	Lys	Val	Thr	Lys	Ser	Leu	Phe	Gly	Arg	Lys	Lys	Lys	Ser	Lys
305					310					315					320
Asn	His	Ala	Gln	Glu	Arg	Asp	Glu	Val	Ser	Gly	Leu	Val	Ser	Gly	Leu
				325					330					335	
Met	Arg	Thr	Ser	Val	Gly	His	Gln	Asp	Ala	Arg	Pro	Glu	Ala	Pro	Ala
			340					345					350		
Ala	Ser	Gly	Pro	Ala	Pro	Val	Ser	Leu	Val	Glu	Thr	Ala	Pro	Glu	Asp
		355					360					365			
Ser	Ser	Pro	Arg	Gly	Thr	Leu	Ala	Ser	Ser	Gly	Asp	Gly	Phe	Glu	Glu
	370					375					380				
Gly	Leu	Thr	Val	Ala	Thr	Val	Val	Glu	Ser	Ala	Leu	Cys	Ala	Leu	Arg
385					390					395					400
Asn	Cys	Ile	Ala	Phe	Met	Pro	Pro	Ala	Glu	Gln	Asn	Pro	Ala	Pro	Leu
				405					410					415	
Ala	Gln	Pro	Glu	Pro	Leu	Val	Trp	Val	Ser	Lys	Trp	Val	Asp	Tyr	Ser
			420					425					430		
Asn	Lys	Phe	Gly	Phe	Gly	Tyr	Gln	Leu	Ser	Ser	Arg	Arg	Val	Ala	Val
		435					440					445			
Leu	Phe	Asn	Asp	Gly	Thr	His	Met	Ala	Leu	Ser	Ala	Asn	Arg	Lys	Thr
	450					455					460				
Val	His	Tyr	Asn	Pro	Thr	Ser	Thr	Lys	His	Phe	Ser	Phe	Ser	Val	Gly
465					470					475					480
Ala	Val	Pro	Arg	Ala	Leu	Gln	Pro	Gln	Leu	Gly	Ile	Leu	Arg	Tyr	Phe
				485					490					495	
Ala	Ser	Tyr	Met	Glu	Gln	His	Leu	Met	Lys	Gly	Gly	Asp	Leu	Pro	Ser
			500					505					510		
Val	Glu	Glu	Val	Glu	Val	Pro	Ala	Pro	Pro	Leu	Leu	Leu	Gln	Trp	Val
		515					520					525			
Lys	Thr	Asp	Gln	Ala	Leu	Leu	Met	Leu	Phe	Ser	Asp	Gly	Thr	Val	Gln
	530					535					540				
Val	Asn	Phe	Tyr	Gly	Asp	His	Thr	Lys	Leu	Ile	Leu	Ser	Gly	Trp	Glu
545					550					555					560
Pro	Leu	Leu	Val	Thr	Phe	Val	Ala	Arg	Asn	Arg	Ser	Ala	Cys	Thr	Tyr
				565					570					575	
Leu	Ala	Ser	His	Leu	Arg	Gln	Leu	Gly	Cys	Ser	Pro	Asp	Leu	Arg	Gln
			580					585					590		
Arg	Leu	Arg	Tyr	Ala	Leu	Arg	Leu	Leu	Arg	Asp	Arg	Ser	Pro	Ala	
		595					600						605		

<210> 6
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 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 1
 <223> Xaa = Pro or Phe

<221> VARIANT
 <222> 2
 <223> Xaa = Pro or any hydrophobic acid

 <221> VARIANT
 <222> 3
 <223> Xaa = Ala, Gln or any hydrophobic acid

 <221> VARIANT
 <222> 4
 <223> Xaa = Thr, Gln, His or Met

 <221> VARIANT
 <222> 6
 <223> Xaa = phosphorylated Thr or phosphorylated Ser

 <221> VARIANT
 <222> 7
 <223> Xaa = Pro or any amino acid

 <400> 6
 Xaa Xaa Xaa Xaa Ser Xaa Xaa
 1 5

 <210> 7
 <211> 7
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> PHOSPHORYLATION
 <222> 5
 <223> Thr at position 5 is phosphorylated

 <400> 7
 Pro Met Gln Ser Thr Pro Leu
 1 5

 <210> 8
 <211> 4
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 1
 <223> Xaa = Met, Tyr, Phe, Ile, Leu, His, or Lys.

 <221> VARIANT
 <222> 2
 <223> Xaa = Ala, His, Met, Thr, Phe, or Gln.

 <221> VARIANT
 <222> 3
 <223> Xaa = Ser, Ala, Gly, or Thr.

 <221> VARIANT

<222> 4
<223> Xaa = Phosphorylated Serine or Threonine

<400> 8
Xaa Xaa Xaa Xaa
1

<210> 9
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 1
<223> Xaa = Any Amino Acid

<221> VARIANT
<222> 2
<223> Xaa = Met, Tyr, Phe, Ile, Leu, His, or Lys.

<221> VARIANT
<222> 3
<223> Xaa = Ala, His, Met, Thr, Phe, or Gln.

<221> VARIANT
<222> 4
<223> Xaa = Ser, Ala, Gly, or Thr.

<221> VARIANT
<222> 5
<223> Xaa = phosphorylated Ser or phosphorylated Thr.

<221> VARIANT
<222> 6
<223> Xaa = Pro, Met, or Asn.

<221> VARIANT
<222> (7)...(7)
<223> Xaa = any amino acid

<400> 9
Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5

<210> 10
<211> 6
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 4
<223> Xaa = pThr or pSer

<400> 10
Met Gln Ser Xaa Pro Leu

1

5

<210> 11
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
 <222> 7
 <223> Thr at position 7 is phosphorylated

<400> 11
 Met Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa Ala Lys Lys
 1 5 10 15

<210> 12
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
 <222> 7
 <223> Ser at position 7 is phosphorylated

<400> 12
 Met Ala Xaa Xaa Xaa Xaa Ser Pro Xaa Xaa Xaa Xaa Ala Lys Lys
 1 5 10 15

<210> 13
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
 <222> 8
 <223> Thr at position 8 is phosphorylated

<400> 13
 Met Ala Xaa Xaa Xaa Xaa Ser Thr Xaa Xaa Xaa Xaa Ala Lys Lys
 1 5 10 15

<210> 14
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 3, 4, 5, 6, 9, 10, 11, 12
<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
<222> 8
<223> Ser at position 8 is phosphorylated

<400> 14
Met Ala Xaa Xaa Xaa Xaa Ser Ser Xaa Xaa Xaa Xaa Ala Lys Lys
1 5 10 15

<210> 15
<211> 20
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 7, 8, 10, 13, 14, 15, 16
<223> Xaa = Any Amino Acid

<400> 15
Glx Gly Glx Gly Gly Ala Xaa Xaa Asx Xaa Thr Pro Xaa Xaa Xaa Xaa
1 5 10 15
Ala Lys Lys Lys
20

<210> 16
<211> 20
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 7, 8, 10, 13, 14, 15, 16
<223> Xaa = Any Amino Acid

<400> 16
Glx Gly Glx Gly Gly Ala Xaa Xaa Asx Xaa Thr Pro Xaa Xaa Xaa Xaa
1 5 10 15
Ala Lys Lys Lys
20

<210> 17
<211> 20
<212> PRT
<213> Homo sapiens

<220>

<221> VARIANT
 <222> 7, 8, 9, 10, 12, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid

 <221> PHOSPHORYLATION
 <222> 11
 <223> Thr at position 11 is phosphorylated

 <400> 17
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

 <210> 18
 <211> 20
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 7, 8, 9, 10, 12, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid

 <400> 18
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

 <210> 19
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> PHOSPHORYLATION
 <222> 8
 <223> Thr at position 8 is phosphorylated

 <400> 19
 Met Ala Gly Pro Met Gln Ser Thr Pro Leu Asn Gly Ala Lys Lys
 1 5 10 15

 <210> 20
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <400> 20
 Met Ala Gly Pro Met Gln Ser Thr Pro Leu Asn Gly Ala Lys Lys
 1 5 10 15

 <210> 21
 <211> 20

<212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 7, 8, 10, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid other than Cys

 <221> MOD_RES
 <222> 1
 <223> Glx at postion 1 is biotinylated

 <221> PHOSPHORYLATION
 <222> 11
 <223> Thr at position 11 is phosphorylated

 <400> 21
 Glx Gly Glx Gly Gly Ala Xaa Xaa Asx Xaa Thr Pro Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

 <210> 22
 <211> 20
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 7, 8, 10, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid other than Cys

 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <400> 22
 Glx Gly Glx Gly Gly Ala Xaa Xaa Asx Xaa Thr Pro Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

 <210> 23
 <211> 19
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 7, 8, 9, 11, 13, 14, 15
 <223> Xaa = Any Amino Acid

 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <221> MOD_RES

<222> 11
 <223> Xaa at position 11 is phosphorylated Serine or
 phosphorylated Threonine

<400> 23
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Asx Xaa Gln Xaa Xaa Xaa Ala
 1 5 10 15
 Lys Lys Lys

<210> 24
 <211> 20
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 7, 8, 9, 10, 12, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid

<221> MOD_RES
 <222> 11
 <223> Serine at position 11 is phosphorylated

<400> 24
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

<210> 25
 <211> 20
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 7, 8, 9, 10, 12, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid

<221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

<221> MOD_RES
 <222> 11
 <223> Threonine at position 11 is phosphorylated

<400> 25
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

<210> 26
 <211> 757

<212> PRT
 <213> Homo sapiens

<400> 26

Met	Ala	Ala	Gly	Gln	Asn	Leu	Gln	Ser	Ser	Glu	Arg	Ser	Glu	Met	Ile
1				5					10					15	
Ala	Thr	Trp	Ser	Pro	Ala	Val	Arg	Thr	Leu	Arg	Asn	Ile	Thr	Asn	Asn
			20					25					30		
Ala	Asp	Ile	Gln	Gln	Met	Asn	Arg	Pro	Ser	Asn	Val	Ala	His	Ile	Leu
		35					40					45			
Gln	Thr	Leu	Ser	Ala	Pro	Thr	Lys	Asn	Leu	Glu	Gln	Gln	Val	Asn	His
		50					55					60			
Ser	Gln	Gln	Gly	His	Thr	Asn	Ala	Asn	Ala	Val	Leu	Phe	Ser	Gln	Val
65					70					75					80
Lys	Val	Thr	Pro	Glu	Thr	His	Met	Leu	Gln	Gln	Gln	Gln	Gln	Ala	Gln
				85					90					95	
Gln	Gln	Gln	Gln	Gln	His	Pro	Val	Leu	His	Leu	Gln	Pro	Gln	Gln	Ile
				100				105					110		
Met	Gln	Leu	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Ile	Ser	Gln	Gln	Pro	Tyr
		115					120					125			
Pro	Gln	Gln	Pro	Pro	His	Pro	Phe	Ser	Gln	Gln	Gln	Gln	Gln	Gln	Gln
		130				135						140			
Gln	Ala	His	Pro	His	Gln	Phe	Ser	Gln	Gln	Gln	Leu	Gln	Phe	Pro	Gln
145					150						155				160
Gln	Gln	Leu	His	Pro	Pro	Gln	Gln	Leu	His	Arg	Pro	Gln	Gln	Gln	Leu
				165					170						175
Gln	Pro	Phe	Gln	Gln	Gln	His	Ala	Leu	Gln	Gln	Gln	Phe	His	Gln	Leu
				180				185					190		
Gln	Gln	His	Gln	Leu	Gln	Gln	Gln	Gln	Leu	Ala	Gln	Leu	Gln	Gln	Gln
		195					200					205			
His	Ser	Leu	Leu	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Ile	Gln	Gln	Gln	Gln
		210				215					220				
Leu	Gln	Arg	Met	His	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Met	Gln	Ser	Gln
225					230					235					240
Thr	Ala	Pro	His	Leu	Ser	Gln	Thr	Ser	Gln	Ala	Leu	Gln	His	Gln	Val
				245					250					255	
Pro	Pro	Gln	Gln	Pro	Pro	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Pro	Pro	Pro
				260				265					270		
Ser	Pro	Gln	Gln	His	Gln	Leu	Phe	Gly	His	Asp	Pro	Ala	Val	Glu	Ile
		275					280					285			
Pro	Glu	Gly	Gly	Phe	Leu	Leu	Gly	Cys	Val	Phe	Ala	Ile	Ala	Asp	Tyr
		290				295					300				
Pro	Glu	Gln	Met	Ser	Asp	Lys	Gln	Leu	Leu	Ala	Thr	Trp	Lys	Arg	Ile
305					310					315					320
Ile	Gln	Ala	His	Gly	Gly	Thr	Val	Asp	Pro	Thr	Phe	Thr	Ser	Arg	Cys
				325					330					335	
Thr	His	Leu	Leu	Cys	Glu	Ser	Gln	Val	Ser	Ser	Ala	Tyr	Ala	Gln	Ala
				340				345					350		
Ile	Arg	Glu	Arg	Lys	Arg	Cys	Val	Thr	Ala	His	Trp	Leu	Asn	Thr	Val
				355			360					365			
Leu	Lys	Lys	Lys	Lys	Met	Val	Pro	Pro	His	Arg	Ala	Leu	His	Phe	Pro
				370		375					380				
Val	Ala	Phe	Pro	Pro	Gly	Gly	Lys	Pro	Cys	Ser	Gln	His	Ile	Ile	Ser
385					390					395					400
Val	Thr	Gly	Phe	Val	Asp	Ser	Asp	Arg	Asp	Asp	Leu	Lys	Leu	Met	Ala
				405					410					415	
Tyr	Leu	Ala	Gly	Ala	Lys	Tyr	Thr	Gly	Tyr	Leu	Cys	Arg	Ser	Asn	Thr
			420					425					430		
Val	Leu	Ile	Cys	Lys	Glu	Pro	Thr	Gly	Leu	Lys	Tyr	Glu	Lys	Ala	Lys

Gln	Leu	Val	Glu	Glu	Leu	Leu	Lys	Ile	Ile	Cys	Ala	Phe	Gln	Leu	Asp	
				85					90					95		
Thr	Gly	Leu	Glu	Tyr	Ala	Asn	Ser	Tyr	Asn	Phe	Ala	Lys	Lys	Glu	Asn	
			100					105					110			
Asn	Ser	Pro	Glu	His	Leu	Lys	Asp	Glu	Val	Ser	Ile	Ile	Gln	Ser	Met	
		115					120					125				
Gly	Tyr	Arg	Asn	Arg	Ala	Lys	Arg	Leu	Leu	Gln	Ser	Glu	Pro	Glu	Asn	
	130					135				140						
Pro	Ser	Leu	Gln	Glu	Thr	Ser	Leu	Ser	Val	Gln	Leu	Ser	Asn	Leu	Gly	
145					150				155						160	
Thr	Val	Arg	Thr	Leu	Arg	Thr	Lys	Gln	Arg	Ile	Gln	Pro	Gln	Lys	Thr	
				165				170						175		
Ser	Val	Tyr	Ile	Glu	Leu	Gly	Ser	Asp	Ser	Ser	Glu	Asp	Thr	Val	Asn	
		180						185					190			
Lys	Ala	Thr	Tyr	Cys	Ser	Val	Gly	Asp	Gln	Glu	Leu	Leu	Gln	Ile	Thr	
		195					200					205				
Pro	Gln	Gly	Thr	Arg	Asp	Glu	Ile	Ser	Leu	Asp	Ser	Ala	Lys	Lys	Ala	
	210					215					220					
Ala	Cys	Glu	Phe	Ser	Glu	Thr	Asp	Val	Thr	Asn	Thr	Glu	His	His	Gln	
225					230				235						240	
Pro	Ser	Asn	Asn	Asp	Leu	Asn	Thr	Thr	Glu	Lys	Arg	Ala	Ala	Glu	Arg	
				245				250						255		
His	Pro	Glu	Lys	Tyr	Gln	Gly	Ser	Ser	Val	Ser	Asn	Leu	His	Val	Glu	
		260						265					270			
Pro	Cys	Gly	Thr	Asn	Thr	His	Ala	Ser	Ser	Leu	Gln	His	Glu	Asn	Ser	
		275					280					285				
Ser	Leu	Leu	Leu	Thr	Lys	Asp	Arg	Met	Asn	Val	Glu	Lys	Ala	Glu	Phe	
	290					295					300					
Cys	Asn	Lys	Ser	Lys	Gln	Pro	Gly	Leu	Ala	Arg	Ser	Gln	His	Asn	Arg	
305					310				315						320	
Trp	Ala	Gly	Ser	Lys	Glu	Thr	Cys	Asn	Asp	Arg	Arg	Thr	Pro	Ser	Thr	
				325					330					335		
Glu	Lys	Lys	Val	Asp	Leu	Asn	Ala	Asp	Pro	Leu	Cys	Glu	Arg	Lys	Glu	
			340					345					350			
Trp	Asn	Lys	Gln	Lys	Leu	Pro	Cys	Ser	Glu	Asn	Pro	Arg	Asp	Thr	Glu	
		355				360						365				
Asp	Val	Pro	Trp	Ile	Thr	Leu	Asn	Ser	Ser	Ile	Gln	Lys	Val	Asn	Glu	
	370					375					380					
Trp	Phe	Ser	Arg	Ser	Asp	Glu	Leu	Leu	Gly	Ser	Asp	Asp	Ser	His	Asp	
385					390				395						400	
Gly	Glu	Ser	Glu	Ser	Asn	Ala	Lys	Val	Ala	Asp	Val	Leu	Asp	Val	Leu	
				405					410					415		
Asn	Glu	Val	Asp	Glu	Tyr	Ser	Gly	Ser	Ser	Glu	Lys	Ile	Asp	Leu	Leu	
			420					425					430			
Ala	Ser	Asp	Pro	His	Glu	Ala	Leu	Ile	Cys	Lys	Ser	Glu	Arg	Val	His	
		435					440					445				
Ser	Lys	Ser	Val	Glu	Ser	Asn	Ile	Glu	Asp	Lys	Ile	Phe	Gly	Lys	Thr	
	450					455					460					
Tyr	Arg	Lys	Lys	Ala	Ser	Leu	Pro	Asn	Leu	Ser	His	Val	Thr	Glu	Asn	
465					470				475						480	
Leu	Ile	Ile	Gly	Ala	Phe	Val	Thr	Glu	Pro	Gln	Ile	Ile	Gln	Glu	Arg	
			485					490						495		
Pro	Leu	Thr	Asn	Lys	Leu	Lys	Arg	Lys	Arg	Arg	Pro	Thr	Ser	Gly	Leu	
			500					505					510			
His	Pro	Glu	Asp	Phe	Ile	Lys	Lys	Ala	Asp	Leu	Ala	Val	Gln	Lys	Thr	
		515					520					525				
Pro	Glu	Met	Ile	Asn	Gln	Gly	Thr	Asn	Gln	Thr	Glu	Gln	Asn	Gly	Gln	
	530					535					540					
Val	Met	Asn	Ile	Thr	Asn	Ser	Gly	His	Glu	Asn	Lys	Thr	Lys	Gly	Asp	

545	Ser	Ile	Gln	Asn	Glu	Lys	Asn	Pro	Asn	Pro	Ile	Glu	Ser	Leu	Glu	Lys	560
					565					570							575
	Glu	Ser	Ala	Phe	Lys	Thr	Lys	Ala	Glu	Pro	Ile	Ser	Ser	Ser	Ser	Ile	Ser
				580					585								590
	Asn	Met	Glu	Leu	Glu	Leu	Asn	Ile	His	Asn	Ser	Lys	Ala	Pro	Lys	Lys	
			595					600					605				
	Asn	Arg	Leu	Arg	Arg	Lys	Ser	Ser	Thr	Arg	His	Ile	His	Ala	Leu	Glu	
		610					615					620					
	Leu	Val	Val	Ser	Arg	Asn	Leu	Ser	Pro	Pro	Asn	Cys	Thr	Glu	Leu	Gln	
	625					630					635						640
	Ile	Asp	Ser	Cys	Ser	Ser	Ser	Glu	Glu	Ile	Lys	Lys	Lys	Lys	Tyr	Asn	
				645						650							655
	Gln	Met	Pro	Val	Arg	His	Ser	Arg	Asn	Leu	Gln	Leu	Met	Glu	Gly	Lys	
				660					665					670			
	Glu	Pro	Ala	Thr	Gly	Ala	Lys	Lys	Ser	Asn	Lys	Pro	Asn	Glu	Gln	Thr	
			675					680					685				
	Ser	Lys	Arg	His	Asp	Ser	Asp	Thr	Phe	Pro	Glu	Leu	Lys	Leu	Thr	Asn	
		690					695					700					
	Ala	Pro	Gly	Ser	Phe	Thr	Lys	Cys	Ser	Asn	Thr	Ser	Glu	Leu	Lys	Glu	
	705					710					715						720
	Phe	Val	Asn	Pro	Ser	Leu	Pro	Arg	Glu	Glu	Lys	Glu	Glu	Lys	Leu	Glu	
				725						730							735
	Thr	Val	Lys	Val	Ser	Asn	Asn	Ala	Glu	Asp	Pro	Lys	Asp	Leu	Met	Leu	
			740						745					750			
	Ser	Gly	Glu	Arg	Val	Leu	Gln	Thr	Glu	Arg	Ser	Val	Glu	Ser	Ser	Ser	
			755					760					765				
	Ile	Ser	Leu	Val	Pro	Gly	Thr	Asp	Tyr	Gly	Thr	Gln	Glu	Ser	Ile	Ser	
		770				775						780					
	Leu	Leu	Glu	Val	Ser	Thr	Leu	Gly	Lys	Ala	Lys	Thr	Glu	Pro	Asn	Lys	
	785					790					795						800
	Cys	Val	Ser	Gln	Cys	Ala	Ala	Phe	Glu	Asn	Pro	Lys	Gly	Leu	Ile	His	
				805						810							815
	Gly	Cys	Ser	Lys	Asp	Asn	Arg	Asn	Asp	Thr	Glu	Gly	Phe	Lys	Tyr	Pro	
			820						825					830			
	Leu	Gly	His	Glu	Val	Asn	His	Ser	Arg	Glu	Thr	Ser	Ile	Glu	Met	Glu	
			835					840					845				
	Glu	Ser	Glu	Leu	Asp	Ala	Gln	Tyr	Leu	Gln	Asn	Thr	Phe	Lys	Val	Ser	
		850				855						860					
	Lys	Arg	Gln	Ser	Phe	Ala	Pro	Phe	Ser	Asn	Pro	Gly	Asn	Ala	Glu	Glu	
	865					870					875						880
	Glu	Cys	Ala	Thr	Phe	Ser	Ala	His	Ser	Gly	Ser	Leu	Lys	Lys	Gln	Ser	
				885						890					895		
	Pro	Lys	Val	Thr	Phe	Glu	Cys	Glu	Gln	Lys	Glu	Glu	Asn	Gln	Gly	Lys	
			900						905					910			
	Asn	Glu	Ser	Asn	Ile	Lys	Pro	Val	Gln	Thr	Val	Asn	Ile	Thr	Ala	Gly	
		915					920						925				
	Phe	Pro	Val	Val	Gly	Gln	Lys	Asp	Lys	Pro	Val	Asp	Asn	Ala	Lys	Cys	
		930				935						940					
	Ser	Ile	Lys	Gly	Gly	Ser	Arg	Phe	Cys	Leu	Ser	Ser	Gln	Phe	Arg	Gly	
	945					950					955						960
	Asn	Glu	Thr	Gly	Leu	Ile	Thr	Pro	Asn	Lys	His	Gly	Leu	Leu	Gln	Asn	
				965						970							975
	Pro	Tyr	Arg	Ile	Pro	Pro	Leu	Phe	Pro	Ile	Lys	Ser	Phe	Val	Lys	Thr	
			980					985						990			
	Lys	Cys	Lys	Lys	Asn	Leu	Leu	Glu	Glu	Asn	Phe	Glu	Glu	His	Ser	Met	
		995					1000						1005				
	Ser	Pro	Glu	Arg	Glu	Met	Gly	Asn	Glu	Asn	Ile	Pro	Ser	Thr	Val	Ser	
		1010					1015										1020

Thr Ile Ser Arg Asn Asn Ile Arg Glu Asn Val Phe Lys Glu Ala Ser
 1025 1030 1035 1040
 Ser Ser Asn Ile Asn Glu Val Gly Ser Ser Thr Asn Glu Val Gly Ser
 1045 1050 1055
 Ser Ile Asn Glu Ile Gly Ser Ser Asp Glu Asn Ile Gln Ala Glu Leu
 1060 1065 1070
 Gly Arg Asn Arg Gly Pro Lys Leu Asn Ala Met Leu Arg Leu Gly Val
 1075 1080 1085
 Leu Gln Pro Glu Val Tyr Lys Gln Ser Leu Pro Gly Ser Asn Cys Lys
 1090 1095 1100
 His Pro Glu Ile Lys Lys Gln Glu Tyr Glu Glu Val Val Gln Thr Val
 1105 1110 1115 1120
 Asn Thr Asp Phe Ser Pro Tyr Leu Ile Ser Asp Asn Leu Glu Gln Pro
 1125 1130 1135
 Met Gly Ser Ser His Ala Ser Gln Val Cys Ser Glu Thr Pro Asp Asp
 1140 1145 1150
 Leu Leu Asp Asp Gly Glu Ile Lys Glu Asp Thr Ser Phe Ala Glu Asn
 1155 1160 1165
 Asp Ile Lys Glu Ser Ser Ala Val Phe Ser Lys Ser Val Gln Lys Gly
 1170 1175 1180
 Glu Leu Ser Arg Ser Pro Ser Pro Phe Thr His Thr His Leu Ala Gln
 1185 1190 1195 1200
 Gly Tyr Arg Arg Gly Ala Lys Lys Leu Glu Ser Ser Glu Glu Asn Leu
 1205 1210 1215
 Ser Ser Glu Asp Glu Glu Leu Pro Cys Phe Gln His Leu Leu Phe Gly
 1220 1225 1230
 Lys Val Asn Asn Ile Pro Ser Gln Ser Thr Arg His Ser Thr Val Ala
 1235 1240 1245
 Thr Glu Cys Leu Ser Lys Asn Thr Glu Glu Asn Leu Leu Ser Leu Lys
 1250 1255 1260
 Asn Ser Leu Asn Asp Cys Ser Asn Gln Val Ile Leu Ala Lys Ala Ser
 1265 1270 1275 1280
 Gln Glu His His Leu Ser Glu Glu Thr Lys Cys Ser Ala Ser Leu Phe
 1285 1290 1295
 Ser Ser Gln Cys Ser Glu Leu Glu Asp Leu Thr Ala Asn Thr Asn Thr
 1300 1305 1310
 Gln Asp Pro Phe Leu Ile Gly Ser Ser Lys Gln Met Arg His Gln Ser
 1315 1320 1325
 Glu Ser Gln Gly Val Gly Leu Ser Asp Lys Glu Leu Val Ser Asp Asp
 1330 1335 1340
 Glu Glu Arg Gly Thr Gly Leu Glu Glu Asn Asn Gln Glu Glu Gln Ser
 1345 1350 1355 1360
 Met Asp Ser Asn Leu Gly Glu Ala Ala Ser Gly Cys Glu Ser Glu Thr
 1365 1370 1375
 Ser Val Ser Glu Asp Cys Ser Gly Leu Ser Ser Gln Ser Asp Ile Leu
 1380 1385 1390
 Thr Thr Gln Gln Arg Asp Thr Met Gln His Asn Leu Ile Lys Leu Gln
 1395 1400 1405
 Gln Glu Met Ala Glu Leu Glu Ala Val Leu Glu Gln His Gly Ser Gln
 1410 1415 1420
 Pro Ser Asn Ser Tyr Pro Ser Ile Ile Ser Asp Ser Ser Ala Leu Glu
 1425 1430 1435 1440
 Asp Leu Arg Asn Pro Glu Gln Ser Thr Ser Glu Lys Ala Val Leu Thr
 1445 1450 1455
 Ser Gln Lys Ser Ser Glu Tyr Pro Ile Ser Gln Asn Pro Glu Gly Leu
 1460 1465 1470
 Ser Ala Asp Lys Phe Glu Val Ser Ala Asp Ser Ser Thr Ser Lys Asn
 1475 1480 1485
 Lys Glu Pro Gly Val Glu Arg Ser Ser Pro Ser Lys Cys Pro Ser Leu

1490	1495	1500
Asp Asp Arg Trp Tyr Met His Ser Cys Ser Gly Ser Leu Gln Asn Arg		
1505	1510	1515
Asn Tyr Pro Ser Gln Glu Glu Leu Ile Lys Val Val Asp Val Glu Glu		1520
	1525	1530
Gln Gln Leu Glu Glu Ser Gly Pro His Asp Leu Thr Glu Thr Ser Tyr		1535
	1540	1545
Leu Pro Arg Gln Asp Leu Glu Gly Thr Pro Tyr Leu Glu Ser Gly Ile		1550
	1555	1560
Ser Leu Phe Ser Asp Asp Pro Glu Ser Asp Pro Ser Glu Asp Arg Ala		1565
	1570	1575
Pro Glu Ser Ala Arg Val Gly Asn Ile Pro Ser Ser Thr Ser Ala Leu		1580
1585	1590	1595
Lys Val Pro Gln Leu Lys Val Ala Glu Ser Ala Gln Ser Pro Ala Ala		1600
	1605	1610
Ala His Thr Thr Asp Thr Ala Gly Tyr Asn Ala Met Glu Glu Ser Val		1615
	1620	1625
Ser Arg Glu Lys Pro Glu Leu Thr Ala Ser Thr Glu Arg Val Asn Lys		1630
	1635	1640
Arg Met Ser Met Val Val Ser Gly Leu Thr Pro Glu Glu Phe Met Leu		1645
	1650	1655
Val Tyr Lys Phe Ala Arg Lys His His Ile Thr Leu Thr Asn Leu Ile		1660
1665	1670	1675
Thr Glu Glu Thr Thr His Val Val Met Lys Thr Asp Ala Glu Phe Val		1680
	1685	1690
Cys Glu Arg Thr Leu Lys Tyr Phe Leu Gly Ile Ala Gly Gly Lys Trp		1695
	1700	1705
Val Val Ser Tyr Phe Trp Val Thr Gln Ser Ile Lys Glu Arg Lys Met		1710
	1715	1720
Leu Asn Glu His Asp Phe Glu Val Arg Gly Asp Val Val Asn Gly Arg		1725
	1730	1735
Asn His Gln Gly Pro Lys Arg Ala Arg Glu Ser Gln Asp Arg Lys Ile		1740
1745	1750	1755
Phe Arg Gly Leu Glu Ile Cys Cys Tyr Gly Pro Phe Thr Asn Met Pro		1760
	1765	1770
Thr Asp Gln Leu Glu Trp Met Val Gln Leu Cys Gly Ala Ser Val Val		1775
	1780	1785
Lys Glu Leu Ser Ser Phe Thr Leu Gly Thr Gly Val His Pro Ile Val		1790
	1795	1800
Val Val Gln Pro Asp Ala Trp Thr Glu Asp Asn Gly Phe His Ala Ile		1805
	1810	1815
Gly Gln Met Cys Glu Ala Pro Val Val Thr Arg Glu Trp Val Leu Asp		1820
1825	1830	1835
Ser Val Ala Leu Tyr Gln Cys Gln Glu Leu Asp Thr Tyr Leu Ile Pro		1840
	1845	1850
Gln Ile Pro His Ser His Tyr		1855
	1860	

<210> 28
 <211> 2089
 <212> PRT
 <213> Homo sapiens

<400> 28
 Met Glu Asp Thr Gln Ala Ile Asp Trp Asp Val Glu Glu Glu Glu Glu
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 Thr Glu Gln Ser Ser Glu Ser Leu Arg Cys Asn Val Glu Pro Val Gly
 20 25 30

Arg	Leu	His	Ile	Phe	Ser	Gly	Ala	His	Gly	Pro	Glu	Lys	Asp	Phe	Pro
	35						40					45			
Leu	His	Leu	Gly	Lys	Asn	Val	Val	Gly	Arg	Met	Pro	Asp	Cys	Ser	Val
	50					55					60				
Ala	Leu	Pro	Phe	Pro	Ser	Ile	Ser	Lys	Gln	His	Ala	Glu	Ile	Glu	Ile
65					70					75					80
Leu	Ala	Trp	Asp	Lys	Ala	Pro	Ile	Leu	Arg	Asp	Cys	Gly	Ser	Leu	Asn
				85					90					95	
Gly	Thr	Gln	Ile	Leu	Arg	Pro	Pro	Lys	Val	Leu	Ser	Pro	Gly	Val	Ser
			100					105						110	
His	Arg	Leu	Arg	Asp	Gln	Glu	Leu	Ile	Leu	Phe	Ala	Asp	Leu	Leu	Cys
			115					120					125		
Gln	Tyr	His	Arg	Leu	Asp	Val	Ser	Leu	Pro	Phe	Val	Ser	Arg	Gly	Pro
	130					135					140				
Leu	Thr	Val	Glu	Glu	Thr	Pro	Arg	Val	Gln	Gly	Glu	Thr	Gln	Pro	Gln
145						150					155				160
Arg	Leu	Leu	Leu	Ala	Glu	Asp	Ser	Glu	Glu	Glu	Val	Asp	Phe	Leu	Ser
				165					170					175	
Glu	Arg	Arg	Met	Val	Lys	Lys	Ser	Arg	Thr	Thr	Ser	Ser	Ser	Val	Ile
			180					185						190	
Val	Pro	Glu	Ser	Asp	Glu	Glu	Gly	His	Ser	Pro	Val	Leu	Gly	Gly	Leu
			195				200						205		
Gly	Pro	Pro	Phe	Ala	Phe	Asn	Leu	Asn	Ser	Asp	Thr	Asp	Val	Glu	Glu
	210					215					220				
Gly	Gln	Gln	Pro	Ala	Thr	Glu	Glu	Ala	Ser	Ser	Ala	Ala	Arg	Arg	Gly
225					230					235					240
Ala	Thr	Val	Glu	Ala	Lys	Gln	Ser	Glu	Ala	Glu	Val	Val	Thr	Glu	Ile
				245					250					255	
Gln	Leu	Glu	Lys	Asp	Gln	Pro	Leu	Val	Lys	Glu	Arg	Asp	Asn	Asp	Thr
			260					265					270		
Lys	Val	Lys	Arg	Gly	Ala	Gly	Asn	Gly	Val	Val	Pro	Ala	Gly	Val	Ile
		275					280					285			
Leu	Glu	Arg	Ser	Gln	Pro	Pro	Gly	Glu	Asp	Ser	Asp	Thr	Asp	Val	Asp
	290					295					300				
Asp	Asp	Ser	Arg	Pro	Pro	Gly	Arg	Pro	Ala	Glu	Val	His	Leu	Glu	Arg
305					310					315					320
Ala	Gln	Pro	Phe	Gly	Phe	Ile	Asp	Ser	Asp	Thr	Asp	Ala	Glu	Glu	Glu
				325					330					335	
Arg	Ile	Pro	Ala	Thr	Pro	Val	Val	Ile	Pro	Met	Lys	Lys	Arg	Lys	Ile
			340					345					350		
Phe	His	Gly	Val	Gly	Thr	Arg	Gly	Pro	Gly	Ala	Pro	Gly	Leu	Ala	His
		355					360					365			
Leu	Gln	Glu	Ser	Gln	Ala	Gly	Ser	Asp	Thr	Asp	Val	Glu	Glu	Gly	Lys
	370					375					380				
Ala	Pro	Gln	Ala	Val	Pro	Leu	Glu	Lys	Ser	Gln	Ala	Ser	Met	Val	Ile
385					390					395					400
Asn	Ser	Asp	Thr	Asp	Asp	Glu	Glu	Glu	Val	Ser	Ala	Ala	Leu	Thr	Leu
				405					410					415	
Ala	His	Leu	Lys	Glu	Ser	Gln	Pro	Ala	Ile	Trp	Asn	Arg	Asp	Ala	Glu
			420					425					430		
Glu	Asp	Met	Pro	Gln	Arg	Val	Val	Leu	Leu	Gln	Arg	Ser	Gln	Thr	Thr
		435				440						445			
Thr	Glu	Arg	Asp	Ser	Asp	Thr	Asp	Val	Glu	Glu	Glu	Glu	Leu	Pro	Val
	450					455						460			
Glu	Asn	Arg	Glu	Ala	Val	Leu	Lys	Asp	His	Thr	Lys	Ile	Arg	Ala	Leu
465					470					475					480
Val	Arg	Ala	His	Ser	Glu	Lys	Asp	Gln	Pro	Phe	Gly	Asp	Ser	Ser	Asp
				485					490					495	
Asp	Ser	Val	Glu	Ala	Asp	Lys	Ser	Ser	Pro	Gly	Ile	His	Leu	Glu	Arg

Pro	Ser	Thr	Ser	Thr	Asp	Gln	Pro	Val	Thr	Pro	Glu	Pro	Thr	Ser	Gln	1445	1450	1455
Ala	Thr	Arg	Gly	Arg	Thr	Asp	Arg	Ser	Ser	Val	Lys	Thr	Pro	Glu	Thr	1460	1465	1470
Val	Val	Pro	Thr	Ala	Pro	Glu	Leu	Gln	Ala	Ser	Ala	Ser	Thr	Asp	Gln	1475	1480	1485
Pro	Val	Thr	Ser	Glu	Pro	Thr	Ser	Arg	Thr	Thr	Arg	Gly	Arg	Lys	Asn	1490	1495	1500
Arg	Ser	Ser	Val	Lys	Thr	Pro	Glu	Thr	Val	Val	Pro	Ala	Ala	Pro	Glu	1505	1510	1515
Leu	Gln	Pro	Pro	Thr	Ser	Thr	Asp	Arg	Pro	Val	Thr	Pro	Glu	Pro	Thr	1525	1530	1535
Ser	Arg	Ala	Thr	Arg	Gly	Arg	Thr	Asn	Arg	Ser	Ser	Val	Lys	Thr	Pro	1540	1545	1550
Glu	Ser	Ile	Val	Pro	Ile	Ala	Pro	Glu	Leu	Gln	Pro	Ser	Thr	Ser	Arg	1555	1560	1565
Asn	Gln	Leu	Val	Thr	Pro	Glu	Pro	Thr	Ser	Arg	Ala	Thr	Arg	Cys	Arg	1570	1575	1580
Thr	Asn	Arg	Ser	Ser	Val	Lys	Thr	Pro	Glu	Pro	Val	Val	Pro	Thr	Ala	1585	1590	1595
Pro	Glu	Pro	His	Pro	Thr	Thr	Ser	Thr	Asp	Gln	Pro	Val	Thr	Pro	Lys	1605	1610	1615
Leu	Thr	Ser	Arg	Ala	Thr	Arg	Arg	Lys	Thr	Asn	Arg	Ser	Ser	Val	Lys	1620	1625	1630
Thr	Pro	Lys	Pro	Val	Glu	Pro	Ala	Ala	Ser	Asp	Leu	Glu	Pro	Phe	Thr	1635	1640	1645
Pro	Thr	Asp	Gln	Ser	Val	Thr	Pro	Glu	Ala	Ile	Ala	Gln	Gly	Gly	Gln	1650	1655	1660
Ser	Lys	Thr	Leu	Arg	Ser	Ser	Thr	Val	Arg	Ala	Met	Pro	Val	Pro	Thr	1665	1670	1675
Thr	Pro	Glu	Phe	Gln	Ser	Pro	Val	Thr	Thr	Asp	Gln	Pro	Ile	Ser	Pro	1685	1690	1695
Glu	Pro	Ile	Thr	Gln	Pro	Ser	Cys	Ile	Lys	Arg	Gln	Arg	Ala	Ala	Gly	1700	1705	1710
Asn	Pro	Gly	Ser	Leu	Ala	Ala	Pro	Ile	Asp	His	Lys	Pro	Cys	Ser	Ala	1715	1720	1725
Pro	Leu	Glu	Pro	Lys	Ser	Gln	Ala	Ser	Arg	Asn	Gln	Arg	Trp	Gly	Ala	1730	1735	1740
Val	Arg	Ala	Ala	Glu	Ser	Leu	Thr	Ala	Ile	Pro	Glu	Pro	Ala	Ser	Pro	1745	1750	1755
Gln	Leu	Leu	Glu	Thr	Pro	Ile	His	Ala	Ser	Gln	Ile	Gln	Lys	Val	Glu	1765	1770	1775
Pro	Ala	Gly	Arg	Ser	Arg	Phe	Thr	Pro	Glu	Leu	Gln	Pro	Lys	Ala	Ser	1780	1785	1790
Gln	Ser	Arg	Lys	Arg	Ser	Leu	Ala	Thr	Met	Asp	Ser	Pro	Pro	His	Gln	1795	1800	1805
Lys	Gln	Pro	Gln	Arg	Gly	Glu	Val	Ser	Gln	Lys	Thr	Val	Ile	Ile	Lys	1810	1815	1820
Glu	Glu	Glu	Glu	Asp	Thr	Ala	Glu	Lys	Pro	Gly	Lys	Glu	Glu	Asp	Val	1825	1830	1835
Val	Thr	Pro	Lys	Pro	Gly	Lys	Arg	Lys	Arg	Asp	Gln	Ala	Glu	Glu	Glu	1845	1850	1855
Pro	Asn	Arg	Ile	Pro	Ser	Arg	Ser	Leu	Arg	Arg	Thr	Lys	Leu	Asn	Gln	1860	1865	1870
Glu	Ser	Thr	Ala	Pro	Lys	Val	Leu	Phe	Thr	Gly	Val	Val	Asp	Ala	Arg	1875	1880	1885
Gly	Glu	Arg	Ala	Val	Leu	Ala	Leu	Gly	Gly	Ser	Leu	Ala	Gly	Ser	Ala	1890	1895	1900
																1905	1910	1915
																		1920

Ala	Glu	Ala	Ser	His	Leu	Val	Thr	Asp	Arg	Ile	Arg	Arg	Thr	Val	Lys
				1925					1930					1935	
Phe	Leu	Cys	Ala	Leu	Gly	Arg	Gly	Ile	Pro	Ile	Leu	Ser	Leu	Asp	Trp
			1940					1945					1950		
Leu	His	Gln	Ser	Arg	Lys	Ala	Gly	Phe	Phe	Leu	Pro	Pro	Asp	Glu	Tyr
		1955					1960						1965		
Val	Val	Thr	Asp	Pro	Glu	Gln	Glu	Lys	Asn	Phe	Gly	Phe	Ser	Leu	Gln
	1970					1975					1980				
Asp	Ala	Leu	Ser	Arg	Ala	Arg	Glu	Arg	Arg	Leu	Leu	Glu	Gly	Tyr	Glu
1985					1990					1995					2000
Ile	Tyr	Val	Thr	Pro	Gly	Val	Gln	Pro	Pro	Pro	Pro	Gln	Met	Gly	Glu
				2005					2010					2015	
Ile	Ile	Ser	Cys	Cys	Gly	Gly	Thr	Tyr	Leu	Pro	Ser	Met	Pro	Arg	Ser
		2020						2025					2030		
Tyr	Lys	Pro	Gln	Arg	Val	Val	Ile	Thr	Cys	Pro	Gln	Asp	Phe	Pro	His
		2035					2040					2045			
Cys	Ser	Ile	Pro	Leu	Arg	Val	Gly	Leu	Pro	Leu	Leu	Ser	Pro	Glu	Phe
	2050					2055				2060					
Leu	Leu	Thr	Gly	Val	Leu	Lys	Gln	Glu	Ala	Lys	Pro	Glu	Ala	Phe	Val
2065				2070						2075					2080
Leu	Ser	Pro	Leu	Glu	Met	Ser	Ser	Thr							
				2085											

<210> 29
 <211> 1309
 <212> PRT
 <213> Homo sapiens

<400> 29

Met	Ser	Gly	Gln	Leu	Val	Gln	Trp	Lys	Ser	Ser	Pro	Asp	Arg	Val	Thr
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Gln	Ser	Ala	Ile	Lys	Glu	Ala	Leu	His	Ser	Pro	Leu	Ala	Asp	Gly	Asp
		20						25					30		
Met	Asn	Glu	Met	Asn	Val	Pro	Val	Asp	Pro	Leu	Glu	Asn	Lys	Val	Asn
	35					40						45			
Ser	Thr	Asn	Ile	Ile	Glu	Gly	Ser	Pro	Lys	Ala	Asn	Pro	Asn	Pro	Val
	50				55						60				
Lys	Phe	Met	Asn	Thr	Ser	Glu	Ile	Phe	Gln	Lys	Ser	Leu	Gly	Leu	Leu
65				70					75					80	
Asp	Glu	Ser	Pro	Arg	His	Asp	Asp	Glu	Leu	Asn	Ile	Glu	Val	Gly	Asp
			85					90						95	
Asn	Asp	Arg	Pro	Asn	Ala	Asn	Ile	Leu	His	Asn	Glu	Arg	Thr	Pro	Asp
			100					105					110		
Leu	Asp	Arg	Ile	Ala	Asn	Phe	Phe	Lys	Ser	Asn	Arg	Thr	Pro	Gly	Lys
		115					120					125			
Glu	Asn	Leu	Leu	Thr	Lys	Tyr	Gln	Ser	Ser	Asp	Leu	Glu	Asp	Thr	Pro
	130					135					140				
Leu	Met	Leu	Arg	Lys	Lys	Met	Thr	Phe	Gln	Thr	Pro	Thr	Asp	Pro	Leu
145				150						155					160
Glu	Gln	Lys	Thr	Phe	Lys	Lys	Leu	Lys	Ser	Asp	Thr	Gly	Phe	Cys	Tyr
			165						170					175	
Tyr	Gly	Glu	Gln	Asn	Asp	Gly	Glu	Glu	Asn	Ala	Ser	Leu	Glu	Val	Thr
			180					185					190		
Glu	Ala	Asp	Ala	Thr	Phe	Val	Gln	Met	Ala	Glu	Arg	Ser	Ala	Asp	Asn
		195					200					205			
Tyr	Asp	Cys	Ala	Leu	Glu	Gly	Ile	Val	Thr	Pro	Lys	Arg	Tyr	Lys	Asp
	210					215					220				
Glu	Leu	Ser	Lys	Ser	Gly	Gly	Met	Gln	Asp	Glu	Arg	Val	Gln	Lys	Thr

225					230					235					240
Gln	Ile	Met	Ile	Ser	Ala	Glu	Ser	Pro	Asn	Ser	Ile	Ser	Ser	Tyr	Asp
				245					250					255	
Lys	Asn	Lys	Ile	Thr	Gly	Asn	Gly	Arg	Thr	Thr	Arg	Asn	Val	Asn	Lys
			260					265					270		
Val	Phe	Asn	Asn	Asn	Glu	Asp	Asn	Ile	Gly	Ala	Ile	Glu	Glu	Lys	Asn
		275					280					285			
Pro	Val	Lys	Lys	Lys	Ser	Glu	Asn	Tyr	Ser	Ser	Asp	Asp	Leu	Arg	Glu
	290					295					300				
Arg	Asn	Asn	Gln	Ile	Ile	Gln	Ser	Asn	Glu	Ser	Glu	Glu	Ile	Asn	Glu
305				310					315					320	
Leu	Glu	Lys	Asn	Leu	Asn	Val	Ser	Gly	Arg	Glu	Asn	Asp	Val	Asn	Asn
			325					330					335		
Leu	Asp	Ile	Asp	Ile	Asn	Ser	Ala	Val	Ser	Gly	Thr	Pro	Ser	Arg	Asn
		340					345						350		
Asn	Ala	Glu	Glu	Glu	Met	Tyr	Ser	Ser	Glu	Ser	Val	Asn	Asn	Arg	Glu
	355					360					365				
Pro	Ser	Lys	Lys	Trp	Ile	Phe	Arg	Tyr	Ser	Lys	Asp	Lys	Thr	Glu	Asn
	370				375						380				
Asn	Ser	Asn	Arg	Ser	Thr	Gln	Ile	Val	Asn	Asn	Pro	Arg	Thr	Gln	Glu
385				390					395					400	
Met	Pro	Leu	Asp	Ser	Ile	Ser	Ile	Asp	Thr	Gln	Pro	Leu	Ser	Lys	Ser
			405					410					415		
Phe	Asn	Thr	Glu	Thr	Asn	Asn	Glu	Leu	Glu	Thr	Gln	Ile	Ile	Val	Ser
		420					425					430			
Ser	Leu	Ser	Gln	Gly	Ile	Ser	Ala	Gln	Lys	Gly	Pro	Val	Phe	His	Ser
	435				440						445				
Thr	Gly	Gln	Thr	Glu	Glu	Ile	Lys	Thr	Gln	Ile	Ile	Asn	Ser	Pro	Glu
	450				455				460						
Gln	Asn	Ala	Leu	Asn	Ala	Thr	Phe	Glu	Thr	Pro	Val	Thr	Leu	Ser	Arg
465				470					475					480	
Ile	Asn	Phe	Glu	Pro	Ile	Leu	Glu	Val	Pro	Glu	Thr	Ser	Ser	Pro	Ser
		485					490						495		
Lys	Asn	Thr	Met	Ser	Lys	Pro	Ser	Asn	Ser	Ser	Pro	Ile	Pro	Lys	Glu
	500						505					510			
Lys	Asp	Thr	Phe	Asn	Ile	His	Glu	Arg	Glu	Val	Glu	Thr	Asn	Asn	Val
	515				520						525				
Phe	Ser	Asn	Asp	Ile	Gln	Asn	Ser	Ser	Asn	Ala	Ala	Thr	Arg	Asp	Asp
	530				535					540					
Ile	Ile	Ile	Ala	Gly	Ser	Ser	Asp	Phe	Asn	Glu	Gln	Lys	Glu	Ile	Thr
545				550					555					560	
Asp	Arg	Ile	Tyr	Leu	Gln	Leu	Ser	Gly	Lys	Gln	Ile	Ser	Asp	Ser	Gly
		565					570						575		
Ser	Asp	Glu	Thr	Glu	Arg	Met	Ser	Pro	Asn	Glu	Leu	Asp	Thr	Lys	Lys
	580						585					590			
Glu	Ser	Thr	Ile	Met	Ser	Glu	Val	Glu	Leu	Thr	Gln	Glu	Leu	Pro	Glu
	595				600						605				
Val	Glu	Glu	Gln	Gln	Asp	Leu	Gln	Thr	Ser	Pro	Lys	Lys	Leu	Val	Val
	610				615					620					
Glu	Glu	Glu	Thr	Leu	Met	Glu	Ile	Lys	Lys	Ser	Lys	Gly	Asn	Ser	Leu
625				630					635					640	
Gln	Leu	His	Asp	Asp	Asn	Lys	Glu	Cys	Asn	Ser	Asp	Lys	Gln	Asp	Gly
		645					650						655		
Thr	Glu	Ser	Leu	Asp	Val	Ala	Leu	Ile	Glu	His	Glu	Ser	Lys	Gly	Gln
	660					665					670				
Ser	Ser	Glu	Leu	Gln	Lys	Asn	Leu	Met	Gln	Leu	Phe	Pro	Ser	Glu	Ser
	675				680						685				
Gln	Glu	Ile	Ile	Gln	Asn	Arg	Arg	Thr	Ile	Lys	Arg	Arg	Gln	Lys	Asp
	690				695						700				

Thr	Ile	Glu	Ile	Gly	Glu	Glu	Glu	Glu	Asn	Arg	Ser	Thr	Lys	Thr	Ser	705	710	715	720
Pro	Thr	Lys	His	Leu	Lys	Arg	Asn	Ser	Asp	Leu	Asp	Ala	Ala	Ser	Ile	725	730	735	
Lys	Arg	Glu	Pro	Ser	Cys	Ser	Ile	Thr	Ile	Gln	Thr	Gly	Glu	Thr	Gly	740	745	750	
Ser	Gly	Lys	Asp	Ser	Lys	Glu	Gln	Ser	Tyr	Val	Phe	Pro	Glu	Gly	Ile	755	760	765	
Arg	Thr	Ala	Asp	Asn	Ser	Phe	Leu	Ser	Lys	Asp	Asp	Ile	Ile	Phe	Gly	770	775	780	
Asn	Ala	Val	Trp	Cys	Gln	Tyr	Thr	Trp	Asn	Tyr	Lys	Phe	Tyr	Pro	Gly	785	790	795	800
Ile	Leu	Leu	Glu	Val	Asp	Thr	Asn	Gln	Asp	Gly	Cys	Trp	Ile	Tyr	Phe	805	810	815	
Glu	Thr	Gly	Arg	Ser	Leu	Thr	Lys	Asp	Glu	Asp	Ile	Tyr	Tyr	Leu	Asp	820	825	830	
Ile	Arg	Ile	Gly	Asp	Ala	Val	Thr	Phe	Asp	Gly	Asn	Glu	Tyr	Val	Val	835	840	845	
Val	Gly	Leu	Glu	Cys	Arg	Ser	His	Asp	Leu	Asn	Ile	Ile	Arg	Cys	Ile	850	855	860	
Arg	Gly	Tyr	Asp	Thr	Val	His	Leu	Lys	Lys	Lys	Asn	Ala	Ser	Gly	Leu	865	870	875	880
Leu	Gly	Lys	Arg	Thr	Leu	Ile	Lys	Ala	Leu	Ser	Ser	Ile	Ser	Leu	Asp	885	890	895	
Leu	Ser	Glu	Trp	Ala	Lys	Arg	Ala	Lys	Ile	Ile	Leu	Glu	Asp	Asn	Glu	900	905	910	
Lys	Asn	Lys	Gly	Asp	Ala	Tyr	Arg	Tyr	Leu	Arg	His	Pro	Ile	Arg	Gly	915	920	925	
Arg	Lys	Ser	Met	Thr	Asn	Val	Leu	Ser	Pro	Lys	Lys	His	Thr	Asp	Asp	930	935	940	
Glu	Lys	Asp	Ile	Asn	Thr	His	Thr	Glu	Val	Tyr	Asn	Asn	Glu	Ile	Glu	945	950	955	960
Ser	Ser	Ser	Glu	Lys	Lys	Glu	Ile	Val	Lys	Lys	Asp	Ser	Arg	Asp	Ala	965	970	975	
Leu	Ala	Glu	His	Ala	Gly	Ala	Pro	Ser	Leu	Leu	Phe	Ser	Ser	Gly	Glu	980	985	990	
Ile	Arg	Thr	Gly	Asn	Val	Phe	Asp	Lys	Cys	Ile	Phe	Val	Leu	Thr	Ser	995	1000	1005	
Leu	Phe	Glu	Asn	Arg	Glu	Glu	Leu	Arg	Gln	Thr	Ile	Glu	Ser	Gln	Gly	1010	1015	1020	
Gly	Thr	Val	Ile	Glu	Ser	Gly	Phe	Ser	Thr	Leu	Phe	Asn	Phe	Thr	His	1025	1030	1035	1040
Pro	Leu	Ala	Lys	Ser	Leu	Val	Asn	Lys	Gly	Asn	Thr	Asp	Asn	Ile	Arg	1045	1050	1055	
Glu	Leu	Ala	Leu	Lys	Leu	Ala	Trp	Lys	Pro	His	Ser	Leu	Phe	Ala	Asp	1060	1065	1070	
Cys	Arg	Phe	Ala	Cys	Leu	Ile	Thr	Lys	Arg	His	Leu	Arg	Ser	Leu	Lys	1075	1080	1085	
Tyr	Leu	Glu	Thr	Leu	Ala	Leu	Gly	Trp	Pro	Thr	Leu	His	Trp	Lys	Phe	1090	1095	1100	
Ile	Ser	Ala	Cys	Ile	Glu	Lys	Lys	Arg	Ile	Val	Pro	His	Leu	Ile	Tyr	1105	1110	1115	1120
Gln	Tyr	Leu	Leu	Pro	Ser	Gly	Glu	Ser	Phe	Arg	Leu	Ser	Leu	Asp	Ser	1125	1130	1135	
Pro	Ser	Lys	Gly	Gly	Ile	Ile	Lys	Ser	Asn	Asn	Ile	Phe	Ser	Phe	Tyr	1140	1145	1150	
Thr	Gln	Phe	Leu	Arg	Gly	Ser	Asn	Leu	Arg	Asp	Gln	Ile	Cys	Gly	Val	1155	1160	1165	
Lys	Lys	Met	Leu	Asn	Asp	Tyr	Ile	Val	Ile	Val	Trp	Gly	Arg	Ser	Glu				

1170	1175	1180
Leu Asp Ser Phe Val Lys Phe Ala Phe Ala Cys Leu Ser Ala Gly Arg		
1185	1190	1195 1200
Met Leu Thr Ile Asp Leu Pro Asn Ile Asp Val Asp Asp Thr Glu Pro		
	1205	1210 1215
Leu Leu Asn Ala Leu Asp Ser Leu Val Pro Arg Ile Gly Ser Glu Leu		
	1220	1225 1230
Ser Asn Arg Lys Leu Lys Phe Leu Ile Tyr Ala Asn Glu Asn Asn Gly		
	1235	1240 1245
Lys Ser Gln Met Lys Leu Leu Glu Arg Leu Arg Ser Gln Ile Ser Leu		
	1250	1255 1260
Lys Phe Lys Lys Phe Asn Tyr Ile Phe His Thr Glu Ser Lys Glu Trp		
1265	1270	1275 1280
Leu Ile Gln Thr Ile Ile Asn Glu Asp Thr Gly Phe His Asp Asp Ile		
	1285	1290 1295
Thr Asp Asn Asp Ile Tyr Asn Thr Ile Ser Glu Val Arg		
1300	1305	

<210> 30
 <211> 3
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 2
 <223> Xaa = phosphorylated Thr or phosphorylated Ser

<221> VARIANT
 <222> 3
 <223> Pro or any amino acid

<400> 30
 Ser Xaa Xaa
 1

<210> 31
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION
 <222> 7
 <223> Tyrosine at position 7 is phosphorylated Tyrosine

<400> 31
 Met Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 32
 <211> 15

<212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 8, 9, 10, 11
 <223> Xaa = Any Amino Acid except Cys

 <221> PHOSPHORYLATION
 <222> 7
 <223> Thr at position 7 is phosphorylated

 <400> 32
 Met Ala Xaa Xaa Xaa Thr Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 33
 <211> 16
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid except Cys

 <221> PHOSPHORYLATION
 <222> 8
 <223> Threonine at position 8 is phosphorylated.

<400> 33
 Met Ala Xaa Xaa Xaa Xaa Ser Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 34
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 8, 9, 10
 <223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION
 <222> 6
 <223> Ser at position 6 is phosphorylated

<400> 34
 Met Ala Xaa Xaa Xaa Ser Pro Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10

<210> 35
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 8, 9, 10, 11
 <223> Xaa = Any Amino Acid except Cys

 <221> PHOSPHORYLATION
 <222> 7
 <223> Ser at position 7 is phosphorylated

 <400> 35
 Met Ala Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 36
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid except Cys.

 <221> PHOSPHORYLATION
 <222> 8
 <223> Thr at position 8 is phosphorylated

<400> 36
 Met Ala Xaa Xaa Xaa Xaa Ser Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 37

<400> 37
 000

<210> 38
 <211> 7
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 1
 <223> Xaa at position 1 is Pro or Phe

<221> VARIANT
 <222> 2
 <223> Xaa at position 2 is Pro or any hydrophobic amino acid

<221> VARIANT
 <222> 3
 <223> Xaa at position 3 is any hydrophobic amino acid, Ala or Gln

<221> VARIANT

<222> 4
 <223> Xaa at position 4 is Thr, Gln, His or Met

 <221> VARIANT
 <222> 6
 <223> Xaa at position 6 is phosphorylated Thr or
 phosphorylated Ser

 <221> VARIANT
 <222> 7
 <223> Xaa at position 7 is Pro or any amino acid

 <400> 38
 Xaa Xaa Xaa Xaa Ser Xaa Xaa
 1 5

 <210> 39
 <211> 7
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> PHOSPHORYLATION
 <222> 5
 <223> Thr at position 5 is phosphorylated Thr

 <400> 39
 Pro Met Gln Ser Thr Pro Leu
 1 5

 <210> 40
 <211> 20
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <221> PHOSPHORYLATION
 <222> 11
 <223> Thr at position 11 is phosphorylated

 <221> VARIANT
 <222> 9
 <223> Xaa at position 9 is a biased mixture of the amino
 acids Pro, Leu, Ile, Val, Phe, Met or Trp.

 <221> VARIANT
 <222> 7, 8, 10, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid except Cys

 <400> 40
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys

<210> 41
 <211> 20
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> 1
 <223> Aminohexanoic acid at position 1 is biotinylated

<221> VARIANT
 <222> 7, 8, 10, 13, 14, 15, 16

7,
 8, 10, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid except Cys

<221> VARIANT
 <222> 9
 <223> Xaa = biased mixture of Pro, Leu, Ile, Val, Phe,
 Met or Trp.

<400> 41
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

<210> 42
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
 <222> 7
 <223> Thr at position 7 is phosphorylated

<400> 42
 Met Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 43
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 8, 9, 10, 11

<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION

<222> 7

<223> Thr at position 7 is phosphorylated

<400> 43

Met Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 44

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 3, 4, 5, 6, 9, 10, 11, 12

<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION

<222> 8

<223> Thr at position 8 is phosphorylated

<400> 44

Met Ala Xaa Xaa Xaa Xaa Ser Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 45

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 3, 4, 5, 8, 9, 10

<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION

<222> 6

<223> Ser at position 6 is phosphorylated

<400> 45

Met Ala Xaa Xaa Xaa Ser Pro Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10

<210> 46

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 3, 4, 5, 6, 8, 9, 10, 11

<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION

<222> 7

<223> Serine at position 7 is phosphorylated

<400> 46

Met Ala Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 47

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 3, 4, 5, 6, 9, 10, 11, 12

<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION

<222> 8

<223> Ser at position 8 is phosphorylated

<400> 47

Met Ala Xaa Xaa Xaa Xaa Ser Ser Xaa Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 48

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 3, 4, 5, 6, 9, 10, 11, 12

<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION

<222> 7

<223> Thr at position 7 is phosphorylated

<400> 48

Met Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 49

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 3, 4, 5, 6, 9, 10, 11, 12

<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION

<222> 8

<223> Thr at position 8 is phosphorylated

<400> 49

Met Ala Xaa Xaa Xaa Xaa Ser Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 50

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 7, 8, 10, 13, 14, 15, 16

<223> Xaa = Any Amino Acid except Cys

<221> MOD_RES

<222> 1

<223> Glx at position 1 is biotinylated

<221> VARIANT

<222> 9

<223> Xaa = biased mixture of Pro, Leu, Ile, Val, Phe,
Met or Trp.

<221> PHOSPHORYLATION

<222> 11

<223> Thr position 11 is phosphorylated

<400> 50

Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa
1 5 10 15
Ala Lys Lys Lys
20

<210> 51

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 7, 8, 10, 13, 14, 15, 16

<223> Xaa = Any Amino Acid except Cys

<221> MOD_RES

<222> 1

<223> Glx at position 1 is biotinylated

<221> VARIANT

<222> 9

<223> Xaa at position 9 is a biased mixture of Pro, Leu,
Ile, Val, Phe, Met or Trp

<400> 51

Glx Gly Glx Gly Gly Ala Xaa Xaa Asx Xaa Thr Pro Xaa Xaa Xaa Xaa
1 5 10 15

Ala Lys Lys Lys
20

<210> 52
<211> 16
<212> PRT
<213> Homo sapiens

<220>
<221> PHOSPHORYLATION
<222> 8
<223> Thr at position 8 is phosphorylated

<400> 52
Met Ala Gly Pro Met Gln Ser Thr Pro Leu Asn Gly Ala Tyr Lys Lys
1 5 10 15

<210> 53
<211> 16
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 3, 4, 5, 10, 11, 12
<223> Xaa = Any Amino Acid

<221> VARIANT
<222> 6
<223> Xaa = Ala, Ile, Leu, Met, Asn, Pro, Ser, Thr or
Val

<221> VARIANT
<222> 7
<223> Xaa = Phosphorylated Ser or Phosphorylated Thr

<221> VARIANT
<222> 9
<223> Xaa = 25% Glu and 75% any amino acid except Arg,
Cys, His or Lys

<400> 53
Met Ala Xaa Xaa Xaa Asx Xaa Thr Gln Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 54
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 3, 4, 5, 6, 8, 9, 10, 11
<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION

<222> 7
 <223> Thr at position 7 is phosphorylated

<400> 54
 Met Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 55
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 8, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION
 <222> 7
 <223> Ser at position 7 is phosphorylated

<400> 55
 Met Ala Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 56
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 7, 9, 10, 11
 <223> Xaa = Any Amino Acid except Cys

<221> VARIANT
 <222> 6
 <223> Xaa = Ala, Ile, Leu, Met, Asn, Pro, Ser, Thr or Val

<221> VARIANT
 <222> 7
 <223> Xaa = phosphorylated Ser or phosphorylated Thr

<221> VARIANT
 <222> 9
 <223> Xaa =25% Glu and 75% any amino acid except Arg, Cyc, His or Lys

<400> 56
 Met Ala Xaa Xaa Xaa Xaa Xaa Gln Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 57
 <211> 20
 <212> PRT

<213> Homo sapiens
 <220>
 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <221> VARIANT
 <222> 7,8,9,14,15,16
 <223> Xaa = any amino acid except

 <221> VARIANT
 <222> 10
 <223> Xaa = biased mixture of Ala, Ile, Leu, Met, Asn,
 Pro, Ser, Thr, or Val.

 <221> VARIANT
 <222> 11
 <223> Xaa = phosphorylated Ser or phosphorylated Thr

 <221> VARIANT
 <222> 13
 <223> Xaa = biased mixture of 25% Glu and 75% any amino
 acid except Arg, Cys, His, or Lys.

 <400> 57
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Xaa Gln Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

 <210> 58
 <211> 20
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <221> VARIANT
 <222> 10
 <223> Xaa = Ala, Ile, Leu, Met, Asn, Pro, Ser, Thr or
 Val.

 <221> VARIANT
 <222> 11
 <223> Xaa = Ser or Thr.

 <221> VARIANT
 <222> 13
 <223> Xaa = 25% Glu and 75% any amino acid except Arg,
 Cys, His or Lys

 <221> VARIANT
 <222> 7, 8, 9, 14, 15, 16
 <223> Xaa= any amino acid

<400> 58
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Xaa Gln Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

<210> 59
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 6
 <223> Xaa = biased mixture Ala, Ile, Leu, Met, Asn, Pro, Ser, Thr, or Val

<221> VARIANT
 <222> 7
 <223> Xaa = phosphorylated Ser or phosphorylated Thr at position 7

<221> VARIANT
 <222> 9
 <223> Xaa = biased mixture of 25% Glu and 75% any amino acid except Arg, Cys, His or Lys.

<221> VARIANT
 <222> 3, 4, 5, 10, 11, 12
 <223> Xaa = any amino acid except Cys.

<400> 59
 Gly Ala Xaa Xaa Xaa Asx Xaa Gln Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 60
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 8, 9, 10, 11
 <223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION
 <222> 7
 <223> Thr at position 7 is phosphorylated

<400> 60
 Met Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 61
 <211> 16
 <212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 3, 4, 5, 6, 8, 9, 10, 11, 12

<223> Xaa = Any Amino Acid except Cys.

<221> PHOSPHORYLATION

<222> 7

<223> Ser at position 7 is phosphorylated

<400> 61

Met	Ala	Xaa	Xaa	Xaa	Xaa	Ser	Xaa	Xaa	Xaa	Xaa	Xaa	Ala	Lys	Lys	Lys
1				5					10					15	

<210> 62

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 8

<223> Thr at position 8 is phosphorylated

<400> 62

Met	Ala	Gly	Pro	Met	Gln	Ser	Thr	Pro	Leu	Asn	Gly	Ala	Lys	Lys
1				5					10					15

<210> 63

<211> 15

<212> PRT

<213> Homo sapiens

<400> 63

Met	Ala	Gly	Pro	Met	Gln	Ser	Thr	Pro	Leu	Asn	Gly	Ala	Lys	Lys
1				5					10					15

<210> 64

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 4

<223> Xaa = phosphorylated Ser or phosphorylated Thr

<400> 64

Tyr	Asp	Ile	Xaa	Gln	Val	Phe	Pro	Phe
1				5				

<210> 65

<211> 16

<212> PRT

<213> Homo sapiens

<400> 65

Gly Ala Ala Tyr Asp Ile Ser Gln Val Phe Pro Phe Ala Lys Lys Lys
1 5 10 15

<210> 66

<211> 16

<212> PRT

<213> Homo sapiens

<400> 66

Gly Ala Ala Tyr Asp Ile Thr Gln Val Phe Pro Phe Ala Lys Lys Lys
1 5 10 15

<210> 67

<211> 16

<212> PRT

<213> Homo sapiens

<400> 67

Gly Ala Ala Tyr Asp Ile Thr Gln Val Phe Pro Phe Ala Lys Lys Lys
1 5 10 15

<210> 68

<211> 16

<212> PRT

<213> Homo sapiens

<400> 68

Gly Ala Ala Tyr Asp Ile Ser Gln Val Phe Pro Phe Ala Lys Lys Lys
1 5 10 15

<210> 69

<211> 278

<212> PRT

<213> Homo sapiens

<400> 69

Ser Ile Ala Pro Ser Ser Leu Asp Pro Ser Asn Arg Lys Pro Leu Thr
1 5 10 15
Val Leu Asn Lys Gly Leu Glu Asn Pro Leu Pro Glu Arg Pro Arg Glu
20 25 30
Lys Glu Glu Pro Val Val Arg Glu Thr Gly Glu Val Val Asp Cys His
35 40 45
Leu Ser Asp Met Leu Gln Gln Leu His Ser Val Asn Ala Ser Lys Pro
50 55 60
Ser Glu Arg Gly Leu Val Arg Gln Glu Glu Ala Glu Asp Pro Ala Cys
65 70 75 80
Ile Pro Ile Phe Trp Val Ser Lys Trp Val Asp Tyr Ser Asp Lys Tyr
85 90 95
Gly Leu Gly Tyr Gln Leu Cys Asp Asn Ser Val Gly Val Leu Phe Asn
100 105 110
Asp Ser Thr Arg Leu Ile Leu Tyr Asn Asp Gly Asp Ser Leu Gln Tyr
115 120 125

Ile	Glu	Arg	Asp	Gly	Thr	Glu	Ser	Tyr	Leu	Thr	Val	Ser	Ser	His	Pro
130						135					140				
Asn	Ser	Leu	Met	Lys	Lys	Ile	Thr	Leu	Leu	Lys	Tyr	Phe	Arg	Asn	Tyr
145					150					155					160
Met	Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn	Ile	Thr	Pro	Arg	Glu
				165					170						175
Gly	Asp	Glu	Leu	Ala	Arg	Leu	Pro	Tyr	Leu	Arg	Thr	Trp	Phe	Arg	Thr
			180					185					190		
Arg	Ser	Ala	Ile	Ile	Leu	His	Leu	Ser	Asn	Gly	Ser	Val	Gln	Ile	Asn
		195					200					205			
Phe	Phe	Gln	Asp	His	Thr	Lys	Leu	Ile	Leu	Cys	Pro	Leu	Met	Ala	Ala
	210					215					220				
Val	Thr	Tyr	Ile	Asp	Glu	Lys	Arg	Asp	Phe	Arg	Thr	Tyr	Arg	Leu	Ser
225					230				235						240
Leu	Leu	Glu	Glu	Tyr	Gly	Cys	Cys	Lys	Glu	Leu	Ala	Ser	Arg	Leu	Arg
				245					250					255	
Tyr	Ala	Arg	Thr	Met	Val	Asp	Lys	Leu	Ser	Ser	Arg	Ser	Ala	Ser	
			260					265					270		
Asn	Arg	Leu	Lys	Ala	Ser										
		275													

<210> 70
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 70

Ser	Ile	Ala	Pro	Ser	Thr	Ile	Asp	Gln	Ser	Leu	Arg	Lys	Pro	Leu	Thr
1				5					10					15	
Ala	Ile	Asn	Lys	Gly	Gln	Asp	Ser	Pro	Leu	Val	Glu	Lys	Gln	Val	Ala
			20					25					30		
Pro	Ala	Lys	Glu	Glu	Glu	Met	Gln	Gln	Pro	Glu	Phe	Thr	Glu	Pro	Ala
		35				40						45			
Asp	Cys	Tyr	Leu	Ser	Glu	Met	Leu	Gln	Gln	Leu	Thr	Cys	Leu	Asn	Ala
	50					55					60				
Val	Lys	Pro	Ser	Glu	Arg	Ala	Leu	Ile	Arg	Gln	Glu	Glu	Ala	Glu	Asp
65					70				75						80
Pro	Ala	Ser	Ile	Pro	Ile	Phe	Trp	Ile	Ser	Lys	Trp	Val	Asp	Tyr	Ser
			85					90						95	
Asp	Lys	Tyr	Gly	Leu	Gly	Tyr	Gln	Leu	Cys	Asp	Asn	Ser	Val	Gly	Val
			100					105					110		
Leu	Phe	Asn	Asp	Ser	Thr	Arg	Leu	Ile	Met	Tyr	Asn	Asp	Gly	Asp	Ser
		115					120					125			
Leu	Gln	Tyr	Ile	Glu	Arg	Asn	Asn	Thr	Glu	Ser	Tyr	Leu	Asn	Val	Arg
	130					135					140				
Ser	Tyr	Pro	Thr	Thr	Leu	Thr	Lys	Lys	Ile	Thr	Leu	Leu	Lys	Tyr	Phe
145					150					155					160
Arg	Asn	Tyr	Met	Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn	Thr	Thr
				165					170						175
Pro	Arg	Glu	Gly	Asp	Glu	Leu	Ala	Arg	Leu	Pro	Phe	Leu	Arg	Thr	Trp
			180					185					190		
Phe	Arg	Thr	Arg	Ser	Ala	Ile	Ile	Leu	His	Leu	Ser	Asn	Gly	Thr	Val
		195					200					205			
Gln	Ile	Asn	Phe	Phe	Gln	Asp	His	Thr	Lys	Ile	Ile	Leu	Cys	Pro	Leu
	210					215					220				
Met	Ala	Ala	Val	Ser	Tyr	Ile	Asp	Glu	Lys	Arg	Glu	Phe	Arg	Thr	Tyr
225					230					235					240
Lys	Leu	Ser	Leu	Ile	Gln	Glu	Phe	Gly	Cys	Cys	Lys	Glu	Leu	Ala	Ser

			245					250					255			
Arg	Leu	Arg	Tyr	Ala	Arg	Thr	Met	Val	Glu	Lys	Leu	Gln	Ser	Ser	Lys	
			260					265					270			
Ser	Ala	Val	Ala	His	Val	Lys	Ala	Ser	Ala							
		275					280									

<210> 71
 <211> 279
 <212> PRT
 <213> Homo sapiens

<400> 71

Gly	Ser	Asn	Asp	Thr	Ile	Glu	Asp	Ser	Met	His	Arg	Lys	Pro	Leu	Met	
1			5						10					15		
Glu	Met	Asn	Gly	Ile	Arg	Pro	Asp	Asp	Thr	Arg	Leu	Glu	Ser	Thr	Phe	
		20					25						30			
Leu	Lys	Ala	Asn	Leu	His	Asp	Ala	Ile	Thr	Ala	Ser	Ala	Gln	Val	Cys	
		35					40					45				
Arg	His	Ser	Glu	Asp	Tyr	Arg	Ser	Asp	Ile	Glu	Ser	Leu	Tyr	Gln	Gln	
	50				55					60						
Leu	Thr	Asn	Leu	Ile	Asn	Gly	Lys	Pro	Arg	Ile	Leu	Gln	Gly	Asn	Leu	
65				70					75					80		
Gly	Asp	Glu	Asn	Thr	Asp	Pro	Ala	Ala	Gln	Pro	Leu	Phe	Trp	Ile	Ser	
			85						90					95		
Lys	Trp	Val	Asp	Tyr	Ser	Asp	Lys	Tyr	Gly	Phe	Gly	Tyr	Gln	Leu	Cys	
		100					105						110			
Asp	Glu	Gly	Ile	Gly	Val	Met	Phe	Asn	Asp	Thr	Thr	Lys	Leu	Ile	Leu	
		115					120					125				
Leu	Pro	Asn	Gln	Ile	Asn	Val	His	Phe	Ile	Asp	Lys	Asp	Gly	Lys	Glu	
	130				135					140						
Thr	Tyr	Met	Thr	Thr	Thr	Asp	Tyr	Cys	Lys	Ser	Leu	Asp	Lys	Lys	Met	
145					150					155					160	
Lys	Leu	Leu	Ser	Tyr	Phe	Lys	Arg	Tyr	Met	Ile	Glu	His	Leu	Val	Lys	
			165						170					175		
Ala	Gly	Ala	Asn	Asn	Val	Asn	Ile	Glu	Ser	Asp	Gln	Ile	Ser	Arg	Met	
			180					185					190			
Pro	His	Leu	His	Ser	Trp	Phe	Arg	Thr	Thr	Cys	Ala	Val	Val	Met	His	
	195						200					205				
Leu	Thr	Asn	Gly	Ser	Val	Gln	Leu	Asn	Phe	Ser	Asp	His	Met	Lys	Leu	
	210					215					220					
Ile	Leu	Cys	Pro	Arg	Met	Ser	Ala	Ile	Thr	Tyr	Met	Asp	Gln	Glu	Lys	
225					230					235					240	
Asn	Phe	Arg	Thr	Tyr	Arg	Phe	Ser	Thr	Ile	Val	Glu	Asn	Gly	Val	Ser	
			245						250					255		
Lys	Asp	Leu	Tyr	Gln	Lys	Ile	Arg	Tyr	Ala	Gln	Glu	Lys	Leu	Arg	Lys	
		260						265					270			
Met	Leu	Glu	Lys	Met	Phe	Thr										
		275														

<210> 72
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 72

Pro	Ile	Phe	Trp	Val	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asp	Lys	Tyr	Gly	
1				5					10					15		

Leu	Gly	Tyr	Gln	Leu	Cys	Asp	Asn	Ser	Val	Gly	Val	Leu	Phe	Asn	Asp	
			20					25					30			
Ser	Thr	Arg	Leu	Ile	Leu	Tyr	Asn	Asp	Gly	Asp	Ser	Leu	Gln	Tyr	Ile	
		35					40					45				
Glu	Arg	Asp	Gly	Thr	Glu	Ser	Tyr	Leu	Thr	Val	Ser	Ser	His	Pro	Asn	
	50				55						60					
Ser	Leu	Met	Lys	Lys	Ile	Thr	Leu	Leu	Lys	Tyr	Phe	Arg	Asn	Tyr	Met	
65				70					75						80	
Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn	Ile	Thr	Pro	Arg	Glu	Gly	
			85					90						95		
Asp	Glu	Leu	Ala	Arg	Leu	Pro	Tyr	Leu	Arg	Thr	Trp	Phe	Arg	Thr	Arg	
		100						105					110			
Ser	Ala	Ile	Ile	Leu	His	Leu	Ser	Asn	Gly	Ser	Val	Gln	Ile	Asn	Phe	
		115					120					125				
Phe	Gln	Asp	His	Thr	Lys	Leu	Ile	Leu	Cys	Pro	Leu	Met	Ala	Ala	Val	
	130				135					140						
Thr	Tyr	Ile	Asp	Glu	Lys	Arg	Asp	Phe	Arg	Thr	Tyr	Arg	Leu	Ser	Leu	
145				150					155						160	
Leu	Glu	Glu	Tyr	Gly	Cys	Cys	Lys	Glu	Leu	Ala	Ser	Arg	Leu	Arg	Tyr	
			165					170					175			
Ala	Arg	Thr	Met	Val	Asp	Lys	Leu	Leu	Ser	Ser	Arg	Ser	Ala	Ser	Asn	
		180						185					190			
Arg	Leu	Lys	Ala	Ser												
		195														

<210> 73
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 73																
Pro	Ile	Phe	Trp	Val	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asp	Lys	Tyr	Gly	
1				5					10				15			
Leu	Gly	Tyr	Gln	Leu	Cys	Asp	Asn	Ser	Val	Gly	Val	Leu	Phe	Asn	Asp	
			20					25					30			
Ser	Thr	Arg	Leu	Ile	Leu	Tyr	Asn	Asp	Gly	Asp	Ser	Leu	Gln	Tyr	Ile	
		35					40					45				
Glu	Arg	Asp	Gly	Thr	Glu	Ser	Tyr	Leu	Thr	Val	Ser	Ser	His	Pro	Asn	
	50				55						60					
Ser	Leu	Met	Lys	Lys	Ile	Thr	Leu	Leu	Asn	Tyr	Phe	Arg	Asn	Tyr	Met	
65				70					75						80	
Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn	Ile	Thr	Pro	Arg	Glu	Gly	
			85					90						95		
Asp	Glu	Leu	Ala	Arg	Leu	Pro	Tyr	Leu	Arg	Thr	Trp	Phe	Arg	Thr	Arg	
		100						105					110			
Ser	Ala	Ile	Ile	Leu	His	Leu	Ser	Asn	Gly	Thr	Val	Gln	Ile	Asn	Phe	
		115					120					125				
Phe	Gln	Asp	His	Thr	Lys	Leu	Ile	Leu	Cys	Pro	Leu	Met	Ala	Ala	Val	
	130				135					140						
Thr	Tyr	Ile	Asn	Glu	Lys	Arg	Asp	Phe	Gln	Thr	Tyr	Arg	Leu	Ser	Leu	
145				150					155						160	
Leu	Glu	Glu	Tyr	Gly	Cys	Cys	Lys	Glu	Leu	Ala	Ser	Arg	Leu	Arg	Tyr	
			165					170					175			
Ala	Arg	Thr	Met	Val	Asp	Lys	Leu	Leu	Ser	Ser	Arg	Ser	Ala	Ser	Asn	
		180						185					190			
Arg	Leu	Lys	Ala	Ser												
		195														

<210> 74
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 74
 Pro Ile Phe Trp Val Ser Lys Trp Val Asp Tyr Ser Asp Lys Tyr Gly
 1 5 10 15
 Leu Gly Tyr Gln Leu Cys Asp Asn Ser Val Gly Val Leu Phe Asn Asp
 20 25 30
 Ser Thr Arg Leu Ile Leu Tyr Asn Asp Gly Asp Ser Leu Gln Tyr Ile
 35 40 45
 Glu Arg Asp Gly Thr Glu Ser Tyr Leu Thr Val Ser Ser His Pro Asn
 50 55 60
 Ser Leu Met Lys Lys Ile Thr Leu Leu Asn Tyr Phe Arg Asn Tyr Met
 65 70 75 80
 Ser Glu His Leu Leu Lys Ala Gly Ala Asn Ile Thr Pro Arg Glu Gly
 85 90 95
 Asp Glu Leu Ala Arg Leu Pro Tyr Leu Arg Thr Trp Phe Arg Thr Arg
 100 105 110
 Ser Ala Ile Ile Leu His Leu Ser Asn Gly Thr Val Gln Ile Asn Phe
 115 120 125
 Phe Gln Asp His Thr Lys Leu Ile Arg Gly Pro Leu Met Ala Ala Val
 130 135 140
 Thr Tyr Ile Asn Glu Lys Arg Asp Phe Arg Thr Tyr Arg Leu Ser Leu
 145 150 155 160
 Leu Glu Glu Tyr Gly Cys Cys Lys Glu Leu Ala Ser Arg Leu Arg Tyr
 165 170 175
 Ala Arg Thr Met Val Asp Lys Leu Leu Ser Ser Arg Ser Ala Cys Asn
 180 185 190
 Arg Leu Lys Ala Ser
 195

<210> 75
 <211> 240
 <212> PRT
 <213> Homo sapiens

<400> 75
 Pro Val Phe Trp Ile Ser Lys Trp Val Asp Tyr Ser Asp Lys Tyr Gly
 1 5 10 15
 Ile Gly Tyr Gln Leu Cys Asp Asn Ser Val Gly Val Leu Phe Asn Asp
 20 25 30
 Asn Ser Arg Ile Met Leu Asp Gln Ala Gly Asn Glu Leu Thr Tyr Ile
 35 40 45
 Glu Lys Ser Asn Lys Glu His Tyr Phe Ser Met His Ser Gly Glu Met
 50 55 60
 Pro Gly Leu Leu Asn Lys Lys Val Thr Leu Leu Lys Tyr Phe Arg Ser
 65 70 75 80
 Tyr Met Asn Asp His Leu Val Lys Ala Gly Glu Gly Ser Glu Gln Arg
 85 90 95
 Ala Gly Asp Asp Leu Ala Arg Leu Pro Thr Leu Arg Val Trp Phe Arg
 100 105 110
 Thr Lys Ser Ala Ile Val Leu His Leu Ser Asn Gly Thr Val Gln Ile
 115 120 125
 Asn Phe Phe Asn Asp His Val Lys Met Met Met Cys Pro Leu Met Gln
 130 135 140
 Ala Val Thr Phe Ile Asp Gln Asn Lys Arg Met Leu Thr Tyr Lys Leu

145					150					155					160
Asn	Asn	Leu	Gln	Arg	Asn	Gly	Cys	Pro	Glu	Lys	Phe	Leu	His	Arg	Leu
				165					170					175	
Lys	Tyr	Ala	Lys	Thr	Met	Ile	Glu	Arg	Leu	Met	Ser	Asp	Ala	Asn	Val
			180					185					190		
Val	Ser	Gln	Asn	Pro	Ala	Arg	Gln	Pro	Asp	Met	Pro	Arg	Ser	Met	Ala
		195					200					205			
Ala	Ala	Arg	Ser	Ala	Ser	Ala	Gly	Ser	Arg	Gly	Pro	Asn	Gln	Ala	Ala
	210					215					220				
Ser	His	Leu	Pro	Gln	Ser	Ala	Ser	Gly	Ser	Asn	Ile	His	Pro	Arg	Arg
225					230					235					240

<210> 76
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 76

Pro	Leu	Phe	Trp	Ile	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asp	Lys	Tyr	Gly
1				5					10				15		
Phe	Gly	Tyr	Gln	Leu	Cys	Asp	Glu	Gly	Ile	Gly	Val	Met	Phe	Asn	Asp
			20					25					30		
Thr	Thr	Lys	Leu	Ile	Leu	Leu	Pro	Asn	Gln	Ile	Asn	Val	His	Phe	Ile
		35					40					45			
Asp	Lys	Asp	Gly	Lys	Glu	Thr	Tyr	Met	Thr	Thr	Thr	Asp	Tyr	Cys	Lys
	50					55					60				
Ser	Leu	Asp	Lys	Lys	Met	Lys	Leu	Leu	Ser	Tyr	Phe	Lys	Arg	Tyr	Met
65					70					75					80
Ile	Glu	His	Leu	Val	Lys	Ala	Gly	Ala	Asn	Asn	Val	Asn	Ile	Glu	Ser
				85					90					95	
Asp	Gln	Ile	Ser	Arg	Met	Pro	His	Leu	His	Ser	Trp	Phe	Arg	Thr	Thr
			100					105					110		
Cys	Ala	Val	Val	Met	His	Leu	Thr	Asn	Gly	Ser	Val	Gln	Leu	Asn	Phe
		115					120					125			
Ser	Asp	His	Met	Lys	Leu	Ile	Leu	Cys	Pro	Arg	Met	Ser	Ala	Ile	Thr
	130					135					140				
Tyr	Met	Asp	Gln	Glu	Lys	Asn	Phe	Arg	Thr	Tyr	Arg	Phe	Ser	Thr	Ile
145					150					155					160
Val	Glu	Asn	Gly	Val	Ser	Lys	Asp	Leu	Tyr	Gln	Lys	Ile	Arg	Tyr	Ala
			165						170					175	
Gln	Glu	Lys	Leu	Arg	Lys	Met	Leu	Glu	Lys	Met	Phe	Thr			
		180						185							

<210> 77
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 77

Pro	Ile	Phe	Trp	Ile	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asp	Lys	Tyr	Gly
1				5					10				15		
Leu	Gly	Tyr	Gln	Leu	Cys	Asp	Asn	Ser	Val	Gly	Val	Leu	Phe	Asn	Asp
			20					25					30		
Ser	Thr	Arg	Leu	Ile	Met	Tyr	Asn	Asp	Gly	Asp	Ser	Leu	Gln	Tyr	Ile
		35					40					45			
Glu	Arg	Asn	Asn	Thr	Glu	Ser	Tyr	Leu	Asn	Val	Arg	Ser	Tyr	Pro	Thr
	50					55					60				

Thr	Leu	Thr	Lys	Lys	Ile	Thr	Leu	Leu	Lys	Tyr	Phe	Arg	Asn	Tyr	Met
65					70					75					80
Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn	Thr	Thr	Pro	Arg	Glu	Gly
			85						90					95	
Asp	Glu	Leu	Ala	Arg	Leu	Pro	Phe	Leu	Arg	Thr	Trp	Phe	Arg	Thr	Arg
			100					105					110		
Ser	Ala	Ile	Ile	Leu	His	Leu	Ser	Asn	Gly	Thr	Val	Gln	Ile	Asn	Phe
		115						120				125			
Phe	Gln	Asp	His	Thr	Lys	Ile	Ile	Leu	Cys	Pro	Leu	Met	Ala	Ala	Val
	130					135					140				
Ser	Tyr	Ile	Asp	Glu	Lys	Arg	Glu	Phe	Arg	Thr	Tyr	Lys	Leu	Ser	Leu
145					150					155					160
Ile	Gln	Glu	Phe	Gly	Cys	Cys	Lys	Glu	Leu	Ala	Ser	Arg	Leu	Arg	Tyr
				165					170					175	
Ala	Arg	Thr	Met	Val	Glu	Lys	Leu	Gln	Ser	Ser	Lys	Ser	Ala	Val	Ala
			180					185					190		
His	Val	Lys	Ala	Ser	Ala										
			195												

<210> 78
 <211> 186
 <212> PRT
 <213> Homo sapiens

Phe	Phe	Gln	Trp	Val	Thr	Lys	Trp	Val	Asp	Tyr	Ser	Asn	Lys	Tyr	Gly
1				5					10					15	
Phe	Gly	Tyr	Gln	Leu	Ser	Asp	His	Thr	Val	Gly	Val	Leu	Phe	Asn	Asn
			20					25					30		
Gly	Ala	His	Met	Ser	Leu	Leu	Pro	Asp	Lys	Lys	Thr	Val	His	Tyr	Tyr
		35					40					45			
Ala	Glu	Leu	Gly	Gln	Cys	Ser	Val	Phe	Pro	Ala	Thr	Asp	Ala	Pro	Glu
	50					55					60				
Gln	Phe	Ile	Ser	Gln	Val	Thr	Val	Leu	Lys	Tyr	Phe	Ser	His	Tyr	Met
65					70					75					80
Glu	Glu	Asn	Leu	Met	Asp	Gly	Gly	Asp	Leu	Pro	Ser	Val	Thr	Asp	Ile
			85					90						95	
Arg	Arg	Pro	Arg	Leu	Tyr	Leu	Leu	Gln	Trp	Leu	Lys	Ser	Asp	Lys	Ala
			100					105					110		
Leu	Met	Met	Leu	Phe	Asn	Asp	Gly	Thr	Phe	Gln	Val	Asn	Phe	Tyr	His
		115					120					125			
Asp	His	Thr	Lys	Ile	Ile	Ile	Cys	Ser	Gln	Asn	Glu	Glu	Tyr	Leu	Leu
	130					135					140				
Thr	Tyr	Ile	Asn	Glu	Asp	Arg	Ile	Ser	Thr	Thr	Phe	Arg	Leu	Thr	Thr
145					150					155					160
Leu	Leu	Met	Ser	Gly	Cys	Ser	Ser	Glu	Leu	Lys	Asn	Arg	Met	Glu	Tyr
				165					170					175	
Ala	Leu	Asn	Met	Leu	Leu	Gln	Arg	Cys	Asn						
			180					185							

<210> 79
 <211> 186
 <212> PRT
 <213> Homo sapiens

Ser	Phe	Gln	Trp	Val	Thr	Lys	Trp	Val	Asp	Tyr	Ser	Asn	Lys	Tyr	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1				5						10				15			
Phe	Gly	Tyr	Gln	Leu	Ser	Asp	His	Thr	Val	Gly	Val	Leu	Phe	Asn	Asn		
			20					25					30				
Gly	Ala	His	Met	Ser	Leu	Leu	Pro	Asp	Lys	Lys	Thr	Val	His	Tyr	Tyr		
		35					40					45					
Ala	Glu	Leu	Gly	Gln	Cys	Ser	Val	Phe	Pro	Ala	Thr	Asp	Ala	Pro	Glu		
	50				55						60						
Gln	Phe	Ile	Ser	Gln	Val	Thr	Val	Leu	Lys	Tyr	Phe	Ser	His	Tyr	Met		
65				70					75						80		
Glu	Glu	Asn	Leu	Met	Asp	Gly	Gly	Asp	Leu	Pro	Ser	Val	Thr	Asp	Ile		
			85					90					95				
Arg	Arg	Pro	Arg	Leu	Tyr	Leu	Leu	Gln	Trp	Leu	Lys	Ser	Asp	Lys	Ala		
			100					105					110				
Leu	Met	Met	Leu	Phe	Asn	Asp	Gly	Thr	Phe	Gln	Val	Asn	Phe	Tyr	His		
		115				120					125						
Asp	His	Thr	Lys	Ile	Ile	Ile	Cys	Asn	Gln	Ser	Glu	Glu	Tyr	Leu	Leu		
	130				135						140						
Thr	Tyr	Ile	Asn	Glu	Asp	Arg	Ile	Ser	Thr	Thr	Phe	Arg	Leu	Thr	Thr		
145				150						155					160		
Leu	Leu	Met	Ser	Gly	Cys	Ser	Leu	Glu	Leu	Lys	Asn	Arg	Met	Glu	Tyr		
			165					170						175			
Ala	Leu	Asn	Met	Leu	Leu	Gln	Arg	Cys	Asn								
			180					185									

<210> 80
 <211> 186
 <212> PRT
 <213> Homo sapiens

<400> 80																	
Ser	Phe	Gln	Trp	Val	Thr	Lys	Trp	Val	Asp	Tyr	Ser	Asn	Lys	Tyr	Gly		
1			5					10					15				
Phe	Gly	Tyr	Gln	Leu	Ser	Asp	His	Thr	Val	Gly	Val	Leu	Phe	Asn	Asn		
		20						25				30					
Gly	Ala	His	Met	Ser	Leu	Leu	Pro	Asp	Lys	Lys	Thr	Val	His	Tyr	Tyr		
		35					40					45					
Ala	Glu	Leu	Gly	Gln	Cys	Ser	Val	Phe	Pro	Ala	Thr	Asp	Ala	Pro	Glu		
	50				55						60						
Gln	Phe	Ile	Ser	Gln	Val	Thr	Val	Leu	Lys	Tyr	Phe	Ser	His	Tyr	Met		
65				70					75						80		
Glu	Glu	Asn	Leu	Met	Asp	Gly	Gly	Asp	Leu	Pro	Ser	Val	Thr	Asp	Ile		
			85					90					95				
Arg	Arg	Pro	Arg	Leu	Tyr	Leu	Leu	Gln	Trp	Leu	Lys	Ser	Asp	Lys	Ala		
			100					105					110				
Leu	Met	Met	Leu	Phe	Asn	Asp	Gly	Thr	Phe	Gln	Val	Asn	Phe	Tyr	His		
		115				120					125						
Asp	His	Thr	Lys	Ile	Ile	Ile	Cys	Asn	Gln	Asn	Glu	Glu	Tyr	Leu	Leu		
	130				135						140						
Thr	Tyr	Ile	Asn	Glu	Asp	Arg	Ile	Ser	Thr	Thr	Phe	Arg	Leu	Thr	Thr		
145				150						155					160		
Leu	Leu	Met	Ser	Gly	Cys	Ser	Leu	Glu	Leu	Lys	His	Arg	Met	Glu	Tyr		
			165					170						175			
Ala	Leu	Asn	Met	Leu	Leu	Gln	Arg	Cys	Asn								
			180					185									

<210> 81
 <211> 226

<212> PRT
 <213> Homo sapiens

<400> 81
 Pro Ile Phe Trp Val Ser Gln Trp Val His Phe Pro Asn His Gly Ile
 1 5 10 15
 Gly Tyr Arg Leu Cys Glu Asn Ser Ser Gly Met Leu Phe Asn Asp Asn
 20 25 30
 Thr Gln Met Lys Val Asn Ser Ala Gly Asn Gln Leu Thr Phe Val Asp
 35 40 45
 Glu Asn Asn Thr Glu Gln Phe Tyr Thr Met Asn Asp Gln Val Pro Met
 50 55 60
 Asn Leu Gln Thr Lys Ile Asn Ile Phe Ser Asn Val Gln Ser Tyr Met
 65 70 75 80
 Asn Thr His Leu Glu Ala Asp Thr His Leu Glu Ala Glu Asp Gln Cys
 85 90 95
 Val Asn Lys Val Pro Pro Leu Arg Asn Phe Ala Arg Leu Pro Thr Ile
 100 105 110
 Gln Asn Trp Phe Glu Thr Lys Ser Ala Val Ile Phe His Leu Ser Asn
 115 120 125
 Gly Thr Val Gln Ile Asn Phe Leu Asp His Val Lys Met Val Leu Cys
 130 135 140
 Pro Leu Leu Lys Ser Val Thr Phe Ile Glu Glu Asn Lys Arg Val Ser
 145 150 155 160
 Thr Phe Thr Phe Ala Asn Ile Leu Thr Asn Ser Cys Pro Lys Lys Tyr
 165 170 175
 Leu Ser Arg Ile Glu Tyr Ala Gln Ala Lys Ile Lys Leu Leu Arg Pro
 180 185 190
 Thr Asn Asn Gln Glu His Val Val Tyr Val Asp Ser Pro Cys Arg Pro
 195 200 205
 Thr Thr Ser Asn Thr Ala His Gly Ala Pro Leu Ala Ser Ser Arg Tyr
 210 215 220
 Leu Ala
 225

<210> 82
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 82
 Ser Phe His Trp Val Thr Lys Trp Val Asp Tyr Ser Asn Lys Tyr Gly
 1 5 10 15
 Phe Gly Tyr Gln Leu Ser Asp His Thr Val Gly Val Leu Phe Asn Asn
 20 25 30
 Gly Ala His Met Ser Phe Leu Pro Asp Lys Lys Thr Val His Tyr Tyr
 35 40 45
 Ala Glu Leu Gly Gln Cys Ser Val Phe Pro Ala Thr Glu Ala Pro Glu
 50 55 60
 Gln Phe Ile Ser Gln Val Thr Val Leu Lys Tyr Phe Ser His Tyr Met
 65 70 75 80
 Glu Glu Asn Leu Met Asp Gly Gly Asp Leu Pro Ser Val Thr Asp Val
 85 90 95
 Cys Arg Pro Arg Leu Tyr Leu Leu Gln Trp Leu Lys Ser Asp Lys Ala
 100 105 110
 Leu Met Met Leu Phe Asn Asp Gly Thr Phe Gln Val Asn Phe Tyr His
 115 120 125
 Asp His Thr Lys Ile Ile Ile Ala Asn Gln Asn Asp Glu Tyr Val Leu

130		135		140
Thr Tyr Ile Asn Glu Asp Arg Met Ser Thr Thr Phe His Leu Ser Thr				
145		150		155
Leu Leu Ile Ser Gly Gly Ser Ser Asp Leu Lys Asn Arg Met Glu Tyr				160
	165		170	175
Ala Leu Asn Met Leu Leu Gln Arg Cys Asn Glu Val Ala				
	180	185		

<210> 83
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 83
Pro Leu Val Trp Phe Ser Glu Trp Val Gly Phe Ser Asn Lys Phe Gly
1 5 10 15
Phe Gly Tyr Gln Leu Ser Ser Arg Arg Val Ala Val Leu Phe Asn Asp
20 25 30
Gly Thr His Met Ala Leu Ser Ala Asn Arg Lys Thr Val His Tyr Asn
35 40 45
Pro Thr Ser Thr Lys His Phe Ser Phe Ser Val Gly Ala Val Arg Arg
50 55 60
Ala Leu Gln Pro Gln Leu Gly Ile Leu Arg Tyr Phe Ala Ser Tyr Met
65 70 75 80
Glu Gln His Leu Met Lys Gly Gly Asp Leu Pro Ser Val Glu Glu Val
85 90 95
Glu Val Pro Ala Pro Pro Leu Leu Leu Gln Trp Val Lys Thr Asp Gln
100 105 110
Ala Leu Leu Met Leu Phe Ser Asp Gly Thr Val Gln Val Asn Phe Tyr
115 120 125
Gly Asp His Thr Lys Leu Ile Leu Ser Gly Trp Glu Pro Leu Leu Val
130 135 140
Thr Phe Val Ala Arg Asn Arg Ser Ala Cys Thr Tyr Leu Ala Ser His
145 150 155 160
Leu Arg Gln Leu Gly Cys Ser Pro Asp Leu Arg Gln Arg Leu Arg Tyr
165 170 175
Ala Leu Arg Leu Leu Arg Asp Arg Ser Pro Ala
180 185

<210> 84
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 84
Pro Leu Val Trp Val Ser Lys Trp Val Asp Tyr Ser Asn Lys Phe Gly
1 5 10 15
Phe Gly Tyr Gln Leu Ser Ser Arg Arg Val Ala Val Leu Phe Asn Asp
20 25 30
Gly Thr His Met Ala Leu Ser Ala Asn Arg Lys Thr Val His Tyr Asn
35 40 45
Pro Thr Ser Thr Lys His Phe Ser Phe Ser Met Gly Ser Val Pro Arg
50 55 60
Ala Leu Gln Pro Gln Leu Gly Ile Leu Arg Tyr Phe Ala Ser Tyr Met
65 70 75 80
Glu Gln His Leu Met Lys Gly Gly Asp Leu Pro Ser Val Glu Glu Ala
85 90 95

Glu	Val	Pro	Ala	Pro	Pro	Leu	Leu	Leu	Gln	Trp	Val	Lys	Thr	Asp	Gln
			100					105						110	
Ala	Leu	Leu	Met	Leu	Phe	Ser	Asp	Gly	Thr	Val	Gln	Val	Asn	Phe	Tyr
			115				120						125		
Gly	Asp	His	Thr	Lys	Leu	Ile	Leu	Ser	Gly	Trp	Glu	Pro	Leu	Leu	Val
			130			135					140				
Thr	Phe	Val	Ala	Arg	Asn	Arg	Ser	Ala	Cys	Thr	Tyr	Leu	Ala	Ser	His
145					150					155					160
Leu	Arg	Gln	Leu	Gly	Cys	Ser	Pro	Asp	Leu	Arg	Gln	Arg	Leu	Arg	Tyr
				165				170						175	
Ala	Leu	Arg	Leu	Leu	Arg	Asp	Gln	Ser	Pro	Ala					
			180					185							

<210> 85
 <211> 186
 <212> PRT
 <213> Homo sapiens

Pro	Leu	Val	Trp	Val	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asn	Lys	Phe	Gly
1				5					10					15	
Phe	Gly	Tyr	Gln	Leu	Ser	Ser	Arg	Arg	Val	Ala	Val	Leu	Phe	Asn	Asp
			20					25					30		
Gly	Thr	His	Met	Ala	Leu	Ser	Ala	Asn	Arg	Lys	Thr	Val	His	Tyr	Asn
			35				40					45			
Pro	Thr	Ser	Thr	Lys	His	Phe	Ser	Phe	Ser	Val	Gly	Ser	Val	Pro	Arg
	50					55					60				
Ala	Leu	Arg	Pro	Gln	Leu	Gly	Ile	Leu	Arg	Tyr	Phe	Ala	Ser	Tyr	Met
65					70				75						80
Glu	Gln	His	Leu	Met	Lys	Gly	Gly	Asp	Leu	Pro	Ser	Val	Glu	Glu	Val
				85				90					95		
Glu	Val	Pro	Ala	Pro	Pro	Leu	Leu	Leu	Gln	Trp	Val	Lys	Thr	Asp	Gln
			100					105					110		
Ala	Leu	Leu	Met	Leu	Phe	Ser	Asp	Gly	Thr	Val	Gln	Val	Asn	Phe	Tyr
			115				120					125			
Gly	Asp	His	Thr	Lys	Leu	Ile	Leu	Ser	Gly	Trp	Glu	Pro	Leu	Leu	Val
			130			135					140				
Thr	Phe	Val	Ala	Arg	Asn	Arg	Ser	Ala	Cys	Thr	Tyr	Leu	Ala	Ser	His
145					150					155					160
Leu	Arg	Gln	Leu	Gly	Cys	Ser	Pro	Asp	Leu	Arg	Gln	Arg	Leu	Arg	Tyr
				165				170						175	
Ala	Leu	Arg	Leu	Leu	Arg	Asp	Gln	Ser	Pro						
			180					185							

<210> 86
 <211> 187
 <212> PRT
 <213> Homo sapiens

His	Phe	Val	Trp	Val	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asn	Lys	Tyr	Gly
1				5					10					15	
Phe	Gly	Tyr	Gln	Leu	Ser	Asn	Arg	Ser	Ile	Gly	Val	Leu	Phe	Asn	Ser
			20					25					30		
Gly	Thr	His	Met	Val	Phe	Pro	Ala	His	Arg	Arg	His	Val	His	Tyr	Asn
			35				40					45			
Leu	Thr	Asn	Ser	Arg	His	Phe	Val	Phe	Pro	Thr	Ser	Thr	Val	Pro	Glu

50		55		60											
Gln	Leu	Gln	Gly	Gln	Met	Ser	Ile	Leu	Gln	Tyr	Phe	Ala	Thr	Tyr	Met
65				70					75						80
Glu	Lys	Asn	Leu	Met	Lys	Gly	Gly	Asp	Leu	Pro	Cys	His	Glu	Glu	Gly
			85						90					95	
Ser	Gln	Ala	Pro	Leu	Leu	Leu	Leu	Gln	Trp	Val	Lys	Thr	Glu	His	Ala
			100					105					110		
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Asp	His	Thr	Lys	Ile	Ile	Leu	Cys	Lys	Pro	Gln	Asp	Ala	Tyr	Leu	Leu
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<210> 87
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 87

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Ser	Thr	Arg	Leu	Ile	Leu	Tyr	Asn	Asp	Gly	Asp	Ser	Leu	Gln	Tyr	Ile
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Ser	Leu	Met	Lys	Lys	Ile	Thr	Leu	Leu	Lys	Tyr	Phe	Arg	Asn	Tyr	Met
65				70					75						80
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<210> 88
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 88

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His	Thr	Lys	Leu	Ile	Leu	Cys	Pro	Leu	Met	Ala	Ala	Val	Thr	Tyr	Ile
		35				40					45				
Asp	Glu	Lys	Arg	Asp	Phe	Arg	Thr	Tyr	Arg	Leu	Ser	Leu	Leu	Glu	Glu
	50			55					60						
Tyr	Gly	Cys	Cys	Lys	Glu	Leu	Ala	Ser	Arg	Leu	Arg	Tyr	Ala	Arg	Thr
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Ala Ser

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<211> 87
<212> PRT
<213> Homo sapiens

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35 40 45
Asp Gly Gln Thr Thr Arg Tyr Gly Glu Asn Glu Lys Leu Pro Glu Tyr
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<211> 6270
<212> DNA
<213> Homo sapiens

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<210> 91
<211> 1972
<212> PRT
<213> Homo sapiens

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<400> 91
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 35      40      45
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Pro Glu Gln Thr Ala Gly Glu Glu Arg Gly Asp Gly Asn Ser Gly Phe
 65      70      75      80
Asn Glu His Leu Lys Glu Asn Lys Val Ala Asp Pro Val Asp Ser Ser
 85      90      95
Asn Leu Asp Thr Cys Gly Ser Ile Ser Gln Val Ile Glu Gln Leu Pro
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Gln Pro Asn Arg Thr Ser Ser Val Leu Gly Met Ser Val Glu Ser Ala
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Glu Lys Glu Glu Asp Thr Ser Gly Asn Thr Thr His Ser Leu Gly Ala
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Glu Asp Thr Ala Ser Ser Gln Leu Gly Phe Gly Val Leu Glu Leu Ser
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Asp Ile Pro Ile Ala Glu Gln Ser Ser Lys Asp Ile Pro Val Thr Ala
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